THE UNIVERSITY OF ALBERTA

PERFORMANCE OF THE DAYAP CREDIT COOPERATIVE AND DEVELOPMENT, INC., PHILIPPINES: A CASE STUDY

by

©

CELESTE LACUNA-RICHMAN

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DEDICATION

To Salvador and Ernest Charles

and

To Mark

ABSTRACT

The purpose of this study was to determine the contribution of a cooperative to rural development in the Philippines, and consequently to understand the organization and operations of such a cooperative. The study assessed the membership requirements of the cooperative, its procedures in providing services, factors affecting leadership, and its relationship with the greater community.

Quantitative and qualitative data were used in the study. Data analysis showed the socioeconomic characteristics of the cooperative's respondents. Chi-square and multiple regression analysis revealed that land tenure status was a significant variable in acquiring loans from the cooperative, even if land ownership was not a membership requirement. Regression also showed that land tenure status is a significant factor in achieving leadership positions. Contrary to expectations, respondents with lower tenure status were more inclined to assume leadership roles. Other variables included in the data analysis were not significantly related to membership, loan acquisition, or leadership.

The most frequently mentioned reason for joining the cooperative is its function as a source of production loans. However, cooperative members also recognize the social benefits the cooperative provides, such as extension and marketing assistance. The cooperative also serves as a source of capital for projects such as duck-raising, which non-farming members can avail themselves of. The respondents suggest several improvements for the cooperative. These include the more efficient processing of loans, raising the maximum loan limit, and higher prices for produce. Despite its limitations, members regarded the cooperative as a viable and dependable source of support services. Members are cognizant of the benefits of belonging to a 'self-help' organization, as opposed to dependence on external aid.

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Table of Contents

CHAPTER 1 THE PROBLEM AND ITS SETTING 1
1.1 Background to the Study 1
1.2 Nature of the Problem 3
1.3 Study Purpose 4
1.4 Importance of the Study 4
1.5 Objectives of the Study 7
1.6 Hypotheses 7
1.7 Assumptions 8
1.8 Limitations of the Study 9
1.9 Plan of the Thesis 9

CHAPTER 2THEORETICAL PERSPECTIVES ON THE PROBLEM 11
2.1 Rural Development in the Philippines 11
2.2 Land Tenure and Agrarian Reform 11
2.3 Agricultural Cooperatives 13
2.3.1 Cooperatives in Developing Countries 15
2.3.2 Cooperatives in the Philippines 17
2.3.3 Types and Functions of a Cooperative 21
2.3.4 Credit Cooperatives 21
2.3.5 Marketing Cooperatives 24
2.3.6 Production Cooperatives 25
2.3.7 Multipurpose Cooperative 26

CHAPTER 3 STUDY AREA AND RESEARCH METHODS 27
3.1 Selection of the Study Area 27
3.1.1 Agriculture in the Laguna Province 27
3.2 General Description of the Study Area 29
3.3 Selection of the Sample 32
3.3.1 Sampling Framework 32
3.3.2 Respondents Sample 32
3.4 Data Collection 33
3.4.1 Methods Used for Data Collection 33
3.4.2 Design of the Interview Schedule 34
3.4.3 Selection of the Questions 34
3.4.4 Format of the Interview Schedule 35
3.4.5 Translating the Questions 35
3.4.6 Testing the Interview Schedule 35
3.4.7 Items of the Interview Schedule 35
3.4.8 Actual Collection of Data 36
3.4.9 Problems of Data Collection 36
3.5 Data Processing 36
3.6 Data Analysis 37
3.7 Reliability and Validity Issues 37

CHAPTER 4DATA ANALYSIS 38
4.1 Sociological Profile of the Respondents 38
4.1.1 Membership 38
4.1.2 Age 38
4.1.3 Education 39
4.1.4 Household Size 40
4.1.5 Main Occupation 41
4.1.6 Secondary Occupation 42
4.1.7 Tenurial Status of the Respondents 43
4.2 Economic Profile of the Respondents 45
4.2.1 Rice Yield 45
4.2.2 Pineapple, Coconut and Other Crops 46
4.2.3 Livestock and Poultry 46
4.2.4 Size of Land Holding 48
4.2.5 Production Expenditures 50
4.2.6 Sources of Capital 55

4.3 Test of Hypotheses 57
4.3.1 Chi-Square Test of Independence 57
4.3.2 First Hypothesis 59
4.3.3 Second Hypothesis 60
4.3.4 Third Hypothesis 61
4.3.5 Fourth Hypothesis 64
4.4 Regression Analysis 67
4.5 Services Received by the Cooperative Members 69
4.5.1 Cash Loans and Agricultural Supplies 70
4.5.2 Extension Services 71
4.5.3 Marketing 71
4.6 Answers to Open-Ended Questions 72
4.6.1 Cooperative's Service to Respondent 72
4.6.2 Personal Contribution to the Cooperative 74
4.6.3 Additional Services Wanted from the Cooperative 75
4.6.4 Further Improvements Wanted for the Cooperative 77

CHAPTER 5SUMMARY, CONCLUSION AND RECOMMENDATIONS 80
5.1 Findings of the Study 80
5.1.1 Socioeconomic Profile of Respondents 80
5.1.2 Factors that Affect Access to Loans and Leadership Positions 82
5.1.3 Respondents' Views About the Cooperative 83
5.2 Recommendations 83
5.2.1 Loan Processing and Crop Insurance 84
5.2.2 Training and Extension 85
5.2.3 Insufficient Loans and Prices for Produce 85
5.2.4 Members' Contribution to the Cooperative 86
5.3 Implications for Further Research 87
5.4 Concluding Statements 87
5.5 A Postscript 88

BIBLIOGRAPHY 89

APPENDIX 1 A Brief History of DCCDI 94

APPENDIX 2 Organizational Chart 99

APPENDIX 3 Interview Schedule 100

List of Tables

Table 4.1 Age of Respondents 39
Table 4.2 Education of Respondents 40
Table 4.3 Total Number of Household Members 41
Table 4.4 Main Occupation of Respondents 42
Table 4.5 Secondary Occupation of Respondents 43
Table 4.6 Tenure Status of Respondents 45
Table 4.7 Yields of Various Crops Grown by Cooperative Members 46
Table 4.8 Livestock and Poultry Projects of Cooperative Members 48
Table 4.9 Hectares Under Cultivation by Cooperative Members 49
Table 4.10 Labor Requirements in Agricultural Production During the Wet Season 51
Table 4.11 Cash Requirements for Labor in Agricultural Production During the Wet Season 51
Table 4.12 Payments in Kind for Labor in Agricultural Production During the Wet Season 52
Table 4.13 Labor Requirements in Agricultural Production During the Dry Season 52
Table 4.14 Cash Requirements for Labor in Agricultural Production During the Dry Season 53
Table 4.15 Payments in Kind for Labor in Agricultural Production During the Dry Season 54
Table 4.16 Sources of Capital for Production 56
Table 4.17 Relationship Between the Dependent Variables and Selected Independent Variables (Larger Tables) 58
Table 4.18 Relationship Between the Dependent Variables and Selected Independent Variables (2 by 2) 59
Table 4.19 Regression Results of Role in the Cooperative on Selected Independent Variables 67
Table 4.20 Regression Results of Farming Financed by Cooperative on Selected Independent Variables 68
Table 4.21 Services Received by Cooperative Members 70
Table 4.22 Kinds of Extension Services Received by Cooperative Members 72
Table 4.23 Cooperative Service to the Respondent 73
Table 4.24 Personal Contribution to the Cooperative 75
Table 4.25 Additional Services Wanted from the Cooperative 77
Table 4.26 Further Improvements Wanted for the Cooperative 79

List of Figures

Figure 3.1 Map of the Study Area 30

CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 Background to the Study

Philippine economic growth declined considerably in the 1980s, which is clearly illustrated by the period 1980 to 1985, when the gross national product (GNP) averaged a rate of -0.5 per cent. The state of the economy was in sharp contrast to the Philippines of postwar years, when the average annual growth rate of the GNP from 1949 to 1979 was about 6 percent (Bautista, 1990:110).

In Bautista's paper on macro-policies and technological choice in the Philippines, the failure to sustain economic growth in the 1980s was attributed to a variety of factors. Some of the factors considered as traditional culprits are the increase of protectionism in industrialized countries, and the fall in international commodity prices. The same conditions however, did not affect the neighboring Asian countries as badly as they did the Philippines. Bautista proposes that the major cause of the Philippines' economic decline is the highly unequal distribution of economic benefits. This in turn, can be observed in the rise of unemployment and underemployment in the country.

Inequality in economic benefits, particularly in the rural sector, is also seen by Hayami et al (1987:31) as a major source of the country's social ills. Agriculture is the main source of revenue for most underdeveloped countries. Unlike agriculture in developed countries, however, it assumes a character that does not easily lend itself to economic analysis. Agriculture in the underdeveloped countries have a duality in terms of production processes, in terms of output, and in terms of markets for that output. Beckford (1972) illustrates this duality by using the example of plantation-peasant agricultural economies. In such an economy, the plantation crop is used for export output, while the peasant sector tends food crops for domestic consumption. It is towards the peasant sector that the whole effort for rural development should be geared, yet its "unruliness", its lack of institutional ties, makes this seem like an impossible task for most policy makers. The balance for production for export and food production for domestic use often tilts in favor of the former, and government policy reflects this.

Land reform has always been a staple of Philippine government programs, but it has failed to be the equalizing factor it should be (Thiesenhusen, 1989:57). The failure of land reform to improve the economy is attributed to the inefficient use of land for increasing employment and labor income. The emphasis on land reform programs on the redistribution of tenanted lands has resulted in the

eviction of tenants by landlords who would rather place their holdings under direct administration rather than have them divided under the land reform program. The class of landless laborers that arose from the ranks of the former tenants has worsened the labor problem.

A number of studies show that there are higher agricultural outputs from the more labor-intensive and smaller family farms than there are from larger holdings (Hayami et al, 1987:5). The haciendas which were run on hired labor, using supervisors to manage diverse farm operations did not prove to be economically efficient. The difficulties of making a profit from haciendas have induced some absentee landlords to keep their holdings idle rather than have tenants cultivate the land. Furthermore, the loopholes within the land reform program enabled many landholders to keep more than the 7 hectares prescribed by the law. Excess holdings were often registered in the name of relatives, to keep them within the family (Otsuka, as cited by Gill, 1991).

The failure of land reform to promote equity in the rural sector could also be attributed to problems in verifying ownership claims. The difficulties of farmers in meeting their payments, "denied them the benefit of capital gains and the prospects of yield enhancement arising from the adoption of high-yielding varieties" (Quisumbing, 1987:37). Beneficiaries of land reform were not able to keep their land titles due to the lack of other kinds of capital for farming. This capital, which includes credit, marketing facilities, inputs such as water, seed and fertilizer, were once provided by landlords. The terms may have been highly unfair to tenants, but these were open for negotiation (Thiesenhusen, 1989:71). Support services such as these, and not just land ownership, are necessary for former tenants to continue production.

Cooperatives are not new to the Philippine rural scene. The Samahang Nayon (Village Organization) was implemented by the government to provide credit for land reform beneficiaries. The National Grains Authority was mandated to help with the marketing of produce (Calayag, 1989:319). However, past cooperatives have not proved as successful as expected. Government organizations providing marketing facilities were often criticized of offering uncompetitive prices for produce. The absence of any support for cultivators who were not benefitted by land reform was hardly addressed (Quisumbing, 1987; Hayami et al, 1987; Asian Productivity Organization, 1989). Cooperatives, however, are still seen as a viable alternative to the feudal conditions of a typical landlord-tenant economic relationship. The needs of farmers remain, and the central government cannot address these needs sufficiently.

1.2 Nature of the Problem

Studies on the land reform programs implemented in the Philippines rate success according to different criteria. In a study on the effect of different rice technology on family labor use in Laguna, land reform was considered a failure if the criterion was to "give land to the tiller" (Smith and Gascon, 1979:15). On the other hand, if improving living conditions in the rural sector was the purpose of land reform, then it has succeeded in a roundabout way. Beneficiaries of land reform were found to withdraw family members from farm work and hire laborers instead, thus reducing unemployment.

The situation described by the above-mentioned study illustrates the necessity of improving equity within the community to improve general economic conditions. Land reform has two major objectives, which are, to serve as a redistributive instrument and a way of increasing farm production. Dorner (1972:19) writes that these two objectives are achievable only if they are accompanied by improvements in the supporting services. These services include agricultural credit, marketing, research and extension, input supply, and processing and storage.

Cooperatives were seen as a way of providing these services. In the Philippines, the development of cooperatives was inevitably linked with the government's efforts at land reform. The Cooperative Law of 1973 defined cooperatives as, "organizations composed primarily of small producers and of consumers who voluntarily join together to form business enterprises which they themselves own, control and patronize" (German Foundation for International Development, 1980:156). The Samahang Nayon is a village-based organization whose functions include:

- facilitating land transfers under the land reform programme and guarantee amortization payments,
- facilitating technical assistance and credit from government sources,
- building up capital in a compulsory savings programme,
- carrying out effective education, and
- promoting discipline among members.

Despite its good intentions, the Samahang Nayon has been criticized for its lack of responsiveness to the community's needs. First, it requires land ownership, or steps towards ownership, as a prerequisite to membership. This automatically disqualifies the majority of landless agricultural workers. Secondly, the Samahang Nayon's policies and operations were considered

inflexible. The difficulty of requesting for services dampened the enthusiasm of many members. By the 1980s, the Samahang Nayon was riddled with ineffectiveness and inefficiency despite its large membership (GFID, 1980:164).

This thesis is a case study of a Philippine cooperative which has existed for the past twenty years, as of February 1992. The study traces the development of the cooperative from a small group of local farmers in Laguna to the expansion of its operations and services. The study is based on interviews with members and officials of the cooperative, on records, and literature on Philippine cooperatives. Although there are no formulas that ensure that a cooperative will fulfill its objectives, certain principles on the subject will hopefully, be learned.

1.3 Study Purpose

The purpose of this study is to describe and explain the operations and development of a particular agricultural cooperative in the Philippines. It also aims to analyze the characteristics that enable a cooperative to fulfill its functions. Various government programs have been implemented to improve economic conditions in the rural areas, including both land reform and cooperatives. However, these were not very successful. The study attempts to answer why this is so.

1.4 Importance of the Study

The study of a cooperative which provides credit and other support services to small farmers is important for the following reason: aside from land reform, credit for agricultural production is one of the basics for rural development. Unfortunately, as an FAO (1964) report observes, governments in developing countries usually require tangible assets before providing loans. In many cases, this tangible asset is land, a resource that is neither widely distributed nor easily transferable. The conditions for obtaining a loan are not within reach of the majority of farmers in developing countries.

Most small and even medium scale farmers, lacking the ability to obtain credit from formal sources often resort to borrowing from moneylenders. These moneylenders do not require security when providing loans, but they do charge exorbitant interest rates, trapping farmers in a cycle of debt that few escape. The production and consumption needs of farmers are so immediate, however, and the paperwork and conditions set by formal lending institutions so complicated, that moneylenders are in little danger of running out of clients. The FAO report suggests that credit services, together

with extension and cooperatives (for credit, marketing and farm supplies) would be the best possible combination for rural development. Governments in the process of implementing land reform are advised to provide these services to increase the value of both land and labor.

Providing cheap credit to developing countries has been the major thrust of most international aid agencies and regional development banks in recent years. Hayami and Ruttan cite some authors who attribute this to the following beliefs:

1. That innovation is the critical element in economic development, and credit is the principle instrument that allows the innovator to bid resources away from other activities;
2. The issue of market reform is considered important becasuse the farmer obtains credit and sells his output to the middleman and is thought to be exploited in each transaction;
3. That public credit institutions are seen as providing part of the supervised education and credit package designed to induce traditional farmers to adopt modern inputs;
4. That credit is an income-transfer mechanism to lessen inequities in income distribution in rural areas, and;
5. That subsidized credit is an incentive to farmers to expand production inspite of disincentives resulting from market interventions or exchange rate distortions that discriminate against farmers in product markets (Hayami and Ruttan, 1985:388-389).

The Philippines has both credit and marketing cooperatives. However, these cooperatives are usually run by the government, and as such are subject to the political changes that occur every so often in the administration. Credit in the Philippines is concentrated in five different institutions. The first is the Philippine National Bank which was established in 1917 especially for agricultural loans. The second is the Development Bank of the Philippines, which was established in 1958 to provide long-term financing for agricultural and industrial development. The third are the rural banks, which were regulated in 1952 to improve the production of the so-called "small farmers". Fourth is the Agricultural Guarantee and Loan Fund (AGLF), which was created in 1966 with government funds to support the Rice and Corn Program. The fifth is the Agricultural Credit Administration, which was established under the Land Reform Code of 1963, and which replaced the Agricultural Credit and Cooperative Financing Organization (Ishikawa, 1970).

The Asian Development Bank study (Ishikawa, 1970) of agricultural strategies in Asia using the Philippines and Thailand as case studies, states that despite the existence of such formal sources of agricultural credit, most farmers went to non-institutional sources such as family, friends, and moneylenders for help. The ineffectiveness of the credit system is illustrated by the most visible source of formal agricultural credit: the rural banks.

Ostensibly for small farmers, rural banks have proved less than effective for two major reasons. First, the definition of "small farmer" used by these banks are those individuals "owning or cultivating, in the aggregate, not more than 50 hectares of land dedicated to agricultural production" (Rural Banks Act, Sec. 5, as cited by Ishikawa, 1970). The majority of individuals and families involved in farming in the Philippines does not fall into this small farmer category. Secondly, the credit provided by the rural banks requires collateral for securing loans. Very often, this security is in the form of real estate mortgage. In some cases, chattel mortgage, or bank deposits were required. The required ownership of land titles however, automatically disqualified everyone except the "bigger small farmers" from obtaining loans. Landless workers were excluded from formal sources of credit. This situation pointed to cooperatives as a feasible source of agricultural credit.

Marketing is another area where cooperatives might be helpful in the Philippines. Calayag (1989) reports that farm products in the Philippines pass through several middlemen before reaching the consumer. Two government agencies, the National Food Authority (NFA) and Food Terminal Inc. (FTI) are in charge of moving huge quantities of food from producer to consumer. The NFA is involved in production, manufacturing, processing and packaging of food products, and in licensing private corporations engaged in food processing as well. The FTI is a producer-wholesale market complex. It is meant to assist farmers in marketing their produce and provide consumers with basic commodities at lower prices.

Aside from these two government agencies, there are farmers' associations formed specifically for marketing purposes. These are called the Area Marketing Cooperatives (AMCs), voluntary business associations made up of at least 10 village organizations. Most cooperatives established before the AMCs were credit organizations, and these were not very successful due to defaults of the repayment of loans. The AMCs are then more concerned with assisting members in the marketing of their produce, as well as helping in production.

A village organization joining the AMC is composed of a minimum of 15 farmers living in a common area. They can only join the cooperative after being trained in three areas: education, savings and discipline, which government administrators have made mandatory. Attending seminars on financial management, on forced savings, and the penalties of defaulting on a loan are required of all the farmers. The AMCs are cooperative schemes which are meant to "ripen" with the implementation of land reform. Although more successful than the preceding cooperatives, some

members complain about the failure to provide the expected services. This is partly due to the continuing dominance of middlemen in the marketing of agricultural produce, and partly to the on-going need for land reform to work before the cooperative can be considered truly operational. Land reform is far from a reality in the Philippines, and cooperatives with a different basis for membership may do better.

1.5 Objectives of the Study

The purpose of this study is to describe and analyze a particular agricultural cooperative. The specific objectives are:

a) To describe the history and development of the Dayap cooperative.

b) To describe the management and operations of the cooperative.

c) To analyze the socioeconomic characteristics of the cooperative's members, and how these characteristics affect the members' standing and role in the cooperative.

d) To analyze the reasons behind the apparent success of the Dayap cooperative, as well as its shortcomings, taking into account the members' perception of the cooperative.

e) To observe the levels of participation within the cooperative.

1.6 Hypotheses

Economic indicators show that rural development in the Philippines has reached a standstill, if not a decline, since the 1980s. The failure of the land reform program to address the problem of inequality in the rural sector has been partly attributed to the lack of support services for farmers. Cooperatives were seen as the solution to both the problem of inequality and the lack of support services. However, many cooperatives did not fulfill their function, while a few did, and even expanded in terms of membership and services offered. This study theorizes that the following factors may spell the difference between success and failure for a cooperative. They are stated as hypotheses for this study.

The first hypothesis has to do with the cooperative's membership requirements. It is hypothesized for the sake of this study that the cooperative which does not require land ownership for membership is likely to attract more farmers to join.

The second hypothesis concerns the cooperative's independence. The cooperative that emphasizes meeting payments for loans rather than operating on government handouts is more likely to last.

The third hypothesis concerns itself with the members' duties and responsibilities to the cooperative. The cooperative that encourages both financial responsibility in obtaining loans and sharing of administrative duties among its members is more sustainable.

The fourth hypothesis is concerned with leadership. The cooperative that allows access to leadership positions regardless of age, gender, land-owning status or "connections" to traditional sources of power is likely to have more credibility among its members.

The fifth hypothesis deals with the cooperative's relationship with the greater community. The cooperative that sets its objectives and operations according to the needs of its community is more likely to grow in membership and functions.

1.7 Assumptions

For purposes of this study, it is assumed that:

a) The transfer of land titles from hacienda owners to tenants and other landless farmers does not necessarily improve either the living conditions nor the productivity of these farmers, in the absence of other capital.

b) A viable support system should exist to support productivity. Two of the most important problems faced by farmers is the absence of credit sources providing loans at reasonable interest rates, and the lack of marketing facilities.

c) Beneficiaries of land titles from the land reform program often cannot keep up with the payments for complete ownership.

d) Government bureaucracies, far removed from actual village conditions because of excessive centralization, have little allowance for emergencies such as crop failures due to natural disasters.

e) Organizing a working cooperative in the Philippines often requires breaking with traditional social structures, often feudal in nature, that exists in agriculture. It is difficult to expect this from a government composed mostly of big landowners and absentee landlords.

These assumptions were stated to briefly illustrate the social and economic conditions within which the cooperative operates.

1.8 Limitations of the Study

The two greatest limitations of this study are due to the lack of financial support and time. The researcher was able to go to the Philippines using a travel allowance from CIDA. However, personal resources for travelling within the Philippines were very limited. As a result, only one cooperative was studied intensively. The study of other cooperatives for comparison's sake had to be limited to a literature review.

As for time constraints, the necessity of finishing the survey within schedule made an extensive pretest of the interview schedule in dialect difficult to arrange. The questionnaire was originally written in English, and was translated after the Philippine Land Bank gave its recommendation on which cooperative to study. The dialect spoken in the cooperative's area was used. Fortunately, it was Tagalog, a dialect known by the researcher. The questionnaire was worded with the help of two farmers in the area, in lieu of a pretest.

Aside from financial constraints, time was also the reason why a cooperative within Luzon, and not in other Philippine islands was chosen for study. Although this is not a limitation in itself, it might lessen the representativeness of the study.

1.9 Plan of the Thesis

This study is divided into five chapters. Chapter One introduces the problem and provides the background of the problem. The chapter deals with the nature of the problem, the importance and objectives of the study, and the set of hypotheses to be tested. The underlying assumptions and limitations of the study are also presented.

In Chapter Two, the theoretical perspective on which the study is based is discussed. The chapter is divided into four parts, which are underdevelopment in the rural sector, land reform in the Philippines, and agricultural cooperatives in the Philippines, and types of cooperatives.

Research design and methods will be presented in Chapter Three. The selection of the study area is discussed, and a description of the area is provided. The sample selection process, data collection method and research design are also explained. The statistical methods used in analyzing the collected data, as well as their validity and reliability are discussed.

Chapter Four presents the findings from the analyzed data and contains a discussion of these findings. It provides a socioeconomic profile of the respondents and the services they get from the cooperative studied. This chapter also discusses the history, organization and services provided by the

cooperative. It is based largely on interviews with the members, management, employees and officers of the cooperative. The chapter also reflects the opinions of the members regarding the improvement of their organization.

Finally, Chapter Five summarizes the important findings of the study. Observations made by the researcher, and recommendations for further research in this area are also included in this chapter.

CHAPTER 2

THEORETICAL PERSPECTIVES ON THE PROBLEM

2.1 Rural Development in the Philippines

For rural development to occur, agriculture in the Philippines has to undergo what is known as structural transformation. Johnson and Kilby (1975:3-31) describe the situation of semi-isolated village economies that dot the countrysides of nations like the Philippines, some of them just a short distance from the westernized capital city. The social and economic horizons of the inhabitants are limited to kinship networks. The inclusion of these villages in a national and ultimately global economy widens their horizons, in a sense, but it also leaves the village economy wanting for the means to catch up. The reliance on local resources, whether materially or technology-wise, diminishes considerably. Limited self-sufficiency is transformed into interdependence as producers are integrated into a national system of markets, information flows and support services. Some of these producers never manage to adjust to the new system.

Baquizal (1991:293-308) discusses government expenditure on the Philippine agricultural sector, which comprises 70 percent of the economy. The importance of agriculture notwithstanding, budget allocation for rural development was decreasing at a rate of about four to nine percent yearly from 1979 to the 1980s. This was due partly to policies that stressed the importance of the urban sector, since surrounding Southeast Asian countries were experiencing spectacular growth in the manufacturing industries. Moreover, this shift in government priorities significantly affected rural development including agrarian reform and community development. Public spending on rural development dipped from 301 million pesos in 1977 to 63 million pesos in 1984. Baquizal states that this decrease in fiscal support for agrarian reform and community development has worsened the social unrest in the country that exists till the present.

2.2 Land Tenure and Agrarian Reform

The importance of agriculture in countries such as the Philippines is reflected by the value placed on land, which is considered not just an important resource for production, but is representative of a way of life. Galbraith (1977) stresses the direct relationship of the lack of land to poverty in agricultural countries. The scarcity and the frequently unequitable distribution of land has made land tenure arrangements necessary. Dorner describes land tenure arrangements as

> those legal and contractual or customary arrangements whereby people in farming gain access to productive opportunities on the land. It constitutes the rules and procedures governing the rights, duties, liberties and exposures of individuals and groups over the use and control over the basic resources of land and water (Dorner, 1972:17).

Land reform, which Dorner (1972) defines as the restructuring of the rules and procedures regarding land, is so vital to rural development that at different times in history, virtually all countries have struggled with the issues posed by it (de Janvry, 1981:263). De Janvry discusses the typologies of land reform in the Third World. He classifies countries according to whether they have semi-feudal, capitalist or socialist types of land reform. The Philippines'land reform program, during the period 1963 to 1972, is classified under the semi-feudal type. From 1972 to 1979, it is classified under the capitalist type. The unlikelihood of a successful land reform program under a capitalist system is analyzed by de Janvry. He concludes that changing present agrarian structures is so dependent upon capitalist development that land reform policies are often just exercises in futility. Nevertheless, he argues for the integration of land reform in development programs.

The importance of land notwithstanding, other factors also influence farming opportunities. Some of these factors are labour, capital and product markets. Land reform, or more correctly, agrarian reform, could be better classified as, "the restructuring of the rules and procedures in relationship to land" (Dorner, 1972), while taking into consideration all the other factors mentioned above, such as labour.

The absence of support services makes the benefits of land reform considerably less than it could be. Redistribution of land rights alone achieves only modest benefits. Agrarian reform, which aims to include the provision of support services like farm credit and marketing assistance, helps to increase production. Only through widely shared increased productivity could the quality of life of the agricultural sector and ultimately, the greater population, be improved (Dorner, 1972).

Unfortunately, the good intentions of agrarian reform are not so easily realized. As Galbraith (1951:695-696) puts it, "... The world is composed of many different kinds of people, but those who own land are not so different ... that they will happily vote themselves out of its possession." Aside from difficulties in legislation, implementing agrarian reform leads to great logistical problems (Dorner, 1972:30-31). The Philippines' experience with land reform will be discussed in the context of cooperatives, which will be presented as a means of providing support services to farmers even as problems on land transfer are being resolved by the government.

2.3 Agricultural Cooperatives

In a comparison of the history of Japan, Taiwan, Korea and the Philippines, four very different Asian countries, a common observation made by the researchers (Hayami and Ruttan, 1985) was that deterioration in the man-land ratio as measured by the increases in the number of farm workers per hectare of arable land has led to an increase in the percentage of agricultural land under irrigation, which also enabled the diffusion of the new seed and fertilizer technology. The increase in production however, did not necessarily affect land infrastructure, or the distribution of benefits from greater yields. Those who did not or could not pay the costs of greater inputs, like irrigation, were further marginalized. The researchers suggest that although the provision of a large scale irrigation system is more the government's responsibility, the efficient allocation of land and water resources depends to a large extent on the presence of local institutions that allow group action by farmers in controlling the use of these resources.

Whether it is the establishment of a new irrigation system, or the formation of a marketing pool for grain, agreement on the decisions that would affect the whole community is needed. The groundwork for such cooperation varies considerably among countries, however, as Japan and its neighbors would illustrate. During Japan's feudal Meiji period, an intensive network of small-scale irrigation systems were already in existence. Traditional norms were such that members of the community were expected to contribute labour and materials towards the maintenance of the irrigation system, just as the village elite were obligated to lead in the construction, operation and maintenance of the system. Other countries in Southeast Asia though, faced with the limitations in land and water resources that Japan did, opened new land for cultivation. The necessity for cooperation for these countries today lies in the worsening man-land ratio, a situation faced by Japan earlier (Hayami and Ruttan, 1985:310-320). Simply, there is less room to expand.

The kinds of cooperative endeavors today are almost as varied as their number. However, there are characteristics common to all cooperatives. Primarily, it is a combination of **social unit** and **business enterprise**. As such, it must be flexibly organized and yet act efficiently enough to ensure large revenue and small costs (van Dooren, 1982).

The difficulties of combining the social and economic aspects of a cooperative were widely discussed even when modern cooperatives were first established. A sociologist such as Taylor (1949) regarded cooperatives as a manifestation of the need to bridge primary groups, such as families, with

secondary groups, such as work teams, in a market culture. Other authors emphasize one of the two aspects even as they are careful not to dismiss the other. Coady (1946), famous for his application of cooperative principles in the Antigonish Movement, emphasizes the spiritual importance of cooperatives as it serves as a tool for economic justice. At the other end of the spectrum, Phillips (1953), regards a cooperative as an association of firms or households, and not an organization of persons. He argues for the cause of cooperatives strictly on the basis of economic efficiency, in that it reduces risks and conflicts of interest among producers.

Authors such as Robotka (1950) classified definitions of cooperatives by their inherent philosophies. In an earlier paper (Robotka, 1946), he discusses theories about cooperative formation. Reynolds (1946), takes the practical route, and defines an agricultural cooperative by its use, as an agency which is owned and controlled by the farmers whom it serves. Its function is to serve as an economic tool for farmers to strengthen their position, and not to become an end in itself.

Van Dooren (1982) gives several definitions of what a cooperative is, especially to how it is used in Europe. He states, however, that the European definition may not be completely applicable to developing countries. He considers the most common principle of a cooperative as:

> an association of members, either personal or corporate, which have voluntarily come together in pursuit of a common economic objective. It is intended to do this through the establishment of a democratically controlled business organization, just contribution by members to the joint capital and a just division of both the risks and returns of the common enterprise (van Dooren, 1982:18).

Perhaps the idea of a cooperative can be better illustrated by contrasting it with a non-cooperative business enterprise. Van Dooren states that the primary objective of a cooperative is to serve the interests of its members, who are both its clients and its owners, rather than to maximize profit. With non-cooperative enterprises, the objective is to gain profit by providing goods and services to third parties.

Aside from the defining principle of a cooperative, there are other principles that characterize a business as one. A cooperative is also an association of people with the same economic objective, which requires capital. Thus, aside from pooling their labour, a member of a cooperative contributes capital and so becomes a joint proprietor. Another principle is the voluntary nature of membership. This principle however, has not always been followed in state cooperatives.

The other principles of a cooperative have to do with the benefits of membership. Since the capital used to run the cooperative is provided by its members, all surplus made is divided in proportion to the quantity of produce a member has marketed through the cooperative (if it is a marketing cooperative). Only interest can be paid on the pooled capital.

The objective of a cooperative is to give goods and services to its members at cost, without the need for a middleman. If a cooperative charges its members too high a price for their produce, then the cooperative has to be repaid later on. By the same token, if members are paid too little for their produce, an extra payment will be made when total revenue is known. Personal responsibility is necessary for a cooperative to work. This means being liable for any debts, as well as ensuring that the cooperative is well-run. Non-members can be involved with the cooperative as consumers, but they are not liable for any loss, nor do they take part in any profit. In short, the cooperative is characterized by voluntariness and equality (van Dooren, 1982).

2.3.1 Cooperatives in Developing Countries

Cooperatives in the developing countries are mostly peasant-based, producers' cooperatives in primarily agricultural economies. As such, these cooperatives have an element of collectivism which according to Worsley (1971), is commonly missed by those who compare the modernization of agriculture in the West with the development of feasible alternatives for farmers in these countries.

As mentioned earlier, one of the reasons for the rise of cooperatives in feudal Japan was the worsening man-land ratio. This condition is true for the rest of Asia, as well as Latin America and Africa. Collectivization of agriculture takes as many different forms as there are different cooperatives: from the kibbutz and moshav in Israel, where production and even living arrangements of members are decided on communally, to the publicly-controlled irrigation of private farms in feudal Japan, to marketing organizations formed by small coffee-growers in Brazil. There is an entire continuum of arrangements from collectivism to possessive individualism (Worsley, 1971).

The distinctions between collective operations and the individualistic, privately-owned farm are not very clear, however. Land may be privately owned, but other resources, such as machinery, water, draft animals and others, might be shared. As well, there are kinship ties, political arrangements and partnerships which have to be considered in the formation of a modern cooperative.

The ignorance of, and occasionally, the disregard for existing social structures and arrangements are often the reasons behind a cooperative's ineffectiveness. The formation of a cooperative does not occur in a setting devoid of existing social norms. In a case study of a marketing cooperative in Tanzania, Saul (1971) discusses the problems that face a newly established state which is trying to make a modern cooperative work in a traditional setting. The move away from traditional modes of authority is not yet so well-established that it could be taken for granted. There is uneven development in the social structure of different areas in the country, which makes the idea of a cooperative more useful in one area than it would be in another. Thus, a nationwide cooperative is not likely to be very successful. The problems that face Tanzania's national cooperative can be observed in varying degrees in almost all developing countries.

However, the cooperative remains the most feasible means of agricultural production in developing countries, for the simple reason that the land and water resources are limited and the necessities for greater production - new seed and fertilizer technology, mechanization and irrigation systems, are well beyond the means of individual farmers. Digby (1965) describes the production and credit cooperatives that were scattered all over India. These organizations number in the hundreds, and some have come about as a result of land reclamation of resettlement projects by the government. The organization of the cooperative itself, however, is mostly voluntary. The small landowners, or land-owning families of the village, are usually the organizers of these cooperatives. Digby characterizes these leaders as having a genuine social concern for their tenants, workers and the smaller peasant owners of the village. Some of these cooperative members he characterized as having perhaps "consciously socialist convictions."

In a paper on agricultural credit, the Food and Agriculture Organization of the United Nations (FAO, 1964) stated that the credit program it was trying to establish was planned around the cooperatives existing in the area. However, cooperatives with less than dependable reputations, or those that were controlled by a few overly powerful individuals, were useless for this purpose. These cooperatives were mistrusted by the small farmers that the credit program was meant to help. Furthermore, the bad name given to cooperatives in general by the existing ones made the formation of new cooperatives difficult. Finally, the FAO was forced to work with individual small farmers. In time, the participating farmers were able to form an advisory committee. **Panchayats** were set up in

the area, and the program administrators were able to consult with these committees about such concerns as village irrigation, and experimental marketing programs, aside from the original credit program.

Many cooperatives in developing countries have been patterned after the Indian Cooperative Credit Society Act of 1904, which was amended in 1912 to include other kinds of cooperatives by the British Colonial Service. The original credit cooperatives were established to lessen, if not completely avoid, the dependence of small farmers on moneylenders. The endless debt incurred by these farmers not only made agricultural progress impossible, it made subsistence itself difficult. As credit cooperatives became more widely accepted, other forms of cooperatives were established in India. Credit cooperatives were formed in Burma (now Myanmar) soon after. In 1921, the British introduced credit societies in Malaya and its African colonies, where conditions such as the low price of crops helped change the thrust of cooperatives from credit to marketing. Non-colonial cooperatives were also formed among the Arab farmers in Palestine in 1932, which was based on forced savings among its members. Cyprus formed credit cooperatives soon after, as did Thailand which based its credit cooperatives on the Indian model, aside from forming rice-marketing cooperatives in the 1950s. Independent as well as government-organized cooperatives were by this time, being tried by different developing countries (Ward, 1969).

2.3.2 Cooperatives in the Philippines

The existence of cooperatives in the Philippines could be traced to the early 1900s. The government had, since that time, linked land reform with the formation of cooperatives (Agabin, 1984:154). In this sense, the Philippines' experience with land reform cannot be separated from the discussion of the formation of its cooperatives.

Land reform has always been an important issue in the Philippines. It has been the rallying cry of all presidential hopefuls, and the promise of all elected officials from President Manuel L. Quezon, the first president of the Commonwealth period, to President Corazon C. Aquino, who reached the end of her term in 1992 (Thiesenhusen, 1989:57-77).

The reason why land reform is such a long-standing issue is partly explained by the Philippines' predominantly agricultural economy, and partly by the fact that, despite all the talk and legislation on

land reform, it remains an elusive goal. Medina (1976), discusses the status of land reform in the Philippines under Presidential Decree (P.D.) No. 27 which was inaugurated on October 21, 1972 under former President Ferdinand Marcos.

Under PD No. 27, the tenant farmer would be considered the owner of a family-size farm of three hectares if irrigated and five hectares if not irrigated. The decree also stipulated that the landowner can retain only seven hectares or less, and only if he cultivates it himself. The Department of Agrarian Reform (DAR) set up several guidelines to facilitate the transfer of land titles to tenants, but, as Medina puts it, "no sooner has the ink dried on paper (that) ... landowners continued to apply all available legal means to retain ownership of their properties" (Medina, 1976:3).

P.D. No. 27 also mandated cooperative formation in the Philippines, as it affected the voluntary nature of a farmers' cooperative. The decree states that

> No title to the land owned by the tenant farmers under this Decree shall be actually issued to a tenant farmer unless and until the tenant farmer has actually become a full-fledged member of a duly organized farmers' cooperative (Presidential Decree No. 27, 1972, as cited by Medina,1976).

In 1975, the Department of Local Government and Community Development (DLGCD) organized 16,455 Samahang Nayon (Village Organizations) nationwide, with an initial membership of 720,583. These cooperatives generated a savings fund for its members which were intended to buy equities in rural banks. Cooperatives were also encouraged to form their own rural banks. The funds saved were meant to guarantee the defaulted land amortizations of farmers who were awarded land transfers under P.D. No.27 (Medina, 1976:12).

Since land reform programs were less than successful, the cooperatives which were based on their implementation also failed. Under President Corazon C. Aquino, the Department of Agrarian Reform (DAR) was still, as of 1989, trying to implement the initial phases of a stepwise land reform program. The barriers to real agrarian reform in the Philippines are summarized by Thiesenhusen (1989), and these are many. However, the most applicable to the argument for supporting services that are not based on land ownership is that agrarian reform will not necessarily benefit most of the rural population. Landless or migratory labor will have to find employment in the urban sector, and this is not readily available. The loss of tenant status is a direct result of land retention laws - landlords are not responsible for non-tenants (Thiesenhusen, 1989). Unfortunately for those who were not recipients of land transfer titles, services such as credit sources and marketing facilities are necessary even for those who cultivate land which is not theirs.

The persistence of the Philippine government in institutionalizing cooperatives in connection with land reform is not without precedent. Institutional constraints have been considered the greatest barrier to the modernization of agriculture since the first Decade of Development after the Second World War. It has been viewed as essential to the growth of productivity both in liberal and Marxist development perspectives. In the early post-war period, there seemed to be a general consensus that the owner-cultivator system provides the most efficient allocation of resources and contributes to national economic growth more than other land arrangements.

Classical economists argued that sharecropping provides the farm worker with less incentive to work than a fixed rent tenant or an owner-cultivator would have. The conclusion remained that on the basis of productivity at least, and irrespective of sociological considerations, the owner-operated agricultural system is the ideal one (Hayami and Ruttan, 1985:390-391). It was on this premise that many of the technical and economic assistance programs of the United States were based. Land reform's success in post-world War II Japan and Germany led to the adoption of similar programs in East Asia in the 1950s and in Latin America in the 1960s (Walinsky, 1977). The establishment of a predominantly owner-cultivator system allowed technical innovations, such as new crop varieties, higher levels of fertilization, and modification of cultural practices to be adapted on a long-term basis. The Philippines was merely continuing to implement agricultural policies which were based on the established economic beliefs of the period.

Unfortunately, land reform has been at best, difficult to legislate in the Philippines, where local power groups actively oppose it. Also, the implementation of land reform in other countries gave rise to the growing body of empirical evidence on the relationships among farm size, tenure and productivity. These relationships did not always follow the rule that owner-cultivator systems mean greater productivity. In the small landholding, productivity differential compared to other kinds of arrangements was not significantly larger. It was typically owner-tenants, farmers who cultivated both rented land and their own small holdings, who produced the most (Hayami and Ruttan, 1985: 391).

This is not to argue that land reform as a goal is no longer worthwhile. However, it seems more reasonable to see it as a tool, rather than a precondition, for productivity growth. Agrarian reform, defined by Kunert (1976:89-94) as composed of three factors, which are: changes in land tenure, production, and the provision of support services, should be emphasized instead. Otherwise, the

results of government programs based on land transfer would go the way of the Samahang Nayon's status as an "existent, but non-operational cooperative" (Technical Board for Agricultural Credit, 1987:223).

Kunert writes that changes in productivity and income can be measured by labour, land and capital. Labour efficiency is related to the size of acreage per labour unit, and perhaps the number of animal units per labour unit. Labour productivity is measured by the physical output per labour unit -- which is how much the farmer can get for his produce. Changes in agricultural support services can be measured by the number of these services, for example, by the number of farmers' cooperatives in the area, the number of beneficiaries in these cooperatives, and the benefits the members get from these cooperatives.

The Aquino Administration's Comprehensive Agrarian Reform Program (CARP), like the PD No.27 of her predecessor, also incorporated cooperatives. Credit education, better management and greater capitalization were emphasized. However, these new cooperatives were also based on land ownership or security of land tenure.

The three main organizations under the Comprehensive Agrarian Reform Program are the Samahang Nayon (SN), the Area Marketing Cooperatives (AMCs) and the Cooperative Rural Banks (CRBs).

The revived Samahang Nayon was the grass-roots level cooperative that served as the educational and capital formation segment of the programme. During its second year of operation, it reached its peak of growth, and declined thereafter. The Samahang Nayon's failure was attributed to the government's lack of interest after the initial support provided.

The Area Marketing Cooperatives were concerned with distribution of production inputs such as seed, fertilizer, herbicide and pesticides. The AMCs were necessary to farmers, who as a group could bargain for higher prices for produce and lower input costs.

The Cooperative Rural Banks are under the ownership and control of the member cooperatives. These were registered with the Securities and Exchange Commission (SEC) under the Central Bank of the Philippines. CRBs are under the supervision of the Bureau of Cooperatives Development (BCOD) of the Ministry of Agriculture.

As of 1980, 1,171 cooperatives were registered in the country. According to Agabin (1984:156), the CRBs had the greatest outreach nationwide. The types of cooperative, as well as the services that a cooperative can provide will be discussed in the following section.

2.3.3 Types and Functions of a Cooperative

Various authors categorize cooperatives in different ways, from the task the cooperative is most concerned with, to ties with the government, and according to levels of complexity and size. For this study's purposes, three of the most common functions of agricultural cooperatives within the Philippines will be described according to their main objectives, and ties with the government as well as complexity in organization will be discussed after. Multipurpose cooperatives, which is the type of organization the Dayap Credit Cooperative and Development, Inc. is, combines these functions and incorporates other services within its mandate.

The types and number of cooperatives in the Philippines are discussed by Rola (1989). One of the most striking observations in the study is the decrease in number of almost all types of Philippine cooperatives. The number of Samahang Nayon was reduced from 20,675 in 1980 to 2, 382 in 1988. Credit cooperatives numbering 1,469 in 1980 was almost half of that in 1988. Marketing cooperatives dwindled from 296 in 1980 to 80 in 1988. Only multipurpose cooperatives such as DCCDI increased slightly, from 126 in 1980 to 159 in 1988. These figures illustrate the short life-span of the majority of Philippine cooperatives. The types of cooperatives will be discussed further in the following sections.

2.3.4 Credit Cooperatives

Historically, and as far as developing countries are concerned, credit cooperatives were the first kind of cooperatives established. In a 1965 study of agricultural credit through cooperatives, the FAO observes that there is little spontaneous demand for agricultural credit for long-term purposes, or development. The subsistence nature of most farming in developing countries makes the need for crop loans, or short-term loans the most dominant, as it is the most urgent. The main purpose of such a loan is to enable the farmer to buy inputs for his crop, whether the crop happens to be for food or for cash. These inputs may include anything from seed to hiring labourers. However, there are also non-agricultural uses of the loan. Due to the difficulty of their circumstances, most farmers availing of short-term credit tend to use the money for household or personal purposes, such as weddings, or children's education.

The need for credit, especially for consumption purposes, cannot be avoided in a subsistence economy. The FAO paper suggests that this fact be accepted by credit institutions instead of persisting in the well-meaning but naive belief that agricultural credit should only go to crop production. For example, a cooperative bank in India which allows 30 to 40 percent of a loan to be used for consumption and 60 to 70 percent for production purposes takes a more realistic view of the matter.

In the same publication, the FAO (1965:94-95) stressed the importance of linking agricultural credit with supply and marketing. A **multipurpose** cooperative was found to be the most appropriate way of providing services, as it is involved in all the external aspects of production that limit farmers.

A number of factors differentiate agricultural credit from other forms of banking. To succeed, agricultural credit requires effective planning and administration, an adequate rural infrastructure, a system for stabilizing fluctuations in prices for agricultural produce, proper land tenure, adequate arrangements for marketing and supply, a well-organized extension service and continuity in government policies (FAO, 1965:9). The difficulties of ensuring that all of these conditions must be fulfilled before credit is provided is considered. The FAO suggests simultaneous implementation of the credit project after a thorough investigation of the minimum requirements of the other factors.

The FAO publication also discusses supervised credit (FAO, 1965:104), the repayment capacity of farmers with regard to real estate (FAO, 1965:184) and the neglect of small farmers for larger agricultural operations (FAO, 1965:197).

Several authors have written on the provision of agricultural credit through cooperatives in the Philippines. Among these is Abada (1984:193-200) who wrote on the benefits and limitations of crop insurance in the Philippines. The same topic is also discussed by Muyco (1987:197-215), who discusses the operationalization of the crop insurance program of the government, as well as its ties with the supervised credit program.

The possibility of an area approach to crop insurance in the Philippines is weighted by Muyco (1987:205). Although this approach would be cheaper for the government to implement, the individualized approach was chosen for three reasons. The reasons given are the weakness of the cooperative movement in the Philippines, the strong individualistic character of Filipino farmers, and the more easily effected resolution of possible conflicts between the insurer and the insured. Despite

these reasons, crop insurance claims are processed as a unit in areas with highly organized farmers, even as certificates of insurance are given to farmers individually. As the study progresses, the importance of crop insurance to a credit cooperative in the Philippines will become more obvious.

The Technical Board for Agricultural Credit (TBAC, 1987:221-228) discusses the Integrated Rural Financing (IRF) scheme launched by the government in 1983. With the Ministry of Agriculture and Food (MAF) as lead agency and the Central Bank of the Philippines (CBX) as the conduit for funds, credit is provided to farmers through organizations such as cooperatives. The transformation of farmers from recipients of subsidized credit to holders of savings is one of the main objectives of this program.

A general perspective on the farm credit situation in Asia is given by Agabin (1984). She discourses on the advantages of institutionalized credit, such as that provided by agricultural cooperatives and other sources. An interesting discussion on the shift in credit patterns is also presented. Although more institutional credit is available to the farmer than in the 1970s, it is also more difficult for small farmers to avail of this credit. The defaults on loans in the 1970s, when rural banks first made institutionalized credit available to the small farm sector, made these farmers ineligible for credit. The majority of these farmers have gone back to borrowing from informal sources of credit. Cooperatives are presently being considered as more practical conduits of institutionalized production loans.

Magpale (1984:205-214) discusses high-risk, non-collateralized loans, credit for natural calamities, crop insurance for natural and market risks, and the demand for credit. He also traces the role of the rural banks, the Development Bank of the Philippines and the Philippine Land Bank in providing credit to the Filipino farmer. These institutions are the most concerned with funding farmer-organizations and credit cooperatives.

On the topic of agricultural credit in the Philippines, a seminar paper of the German Foundation for International Development (GFID) discusses crop insurance (GFID, 1980:183), alternative credit allocation policies (GFID, 1980:194), and low interest rates for poor farmers (GFID, 1980:136).

Finally, a word from a small farmer himself. Dimagiba (1984:201-204), a leaseholder from the Philippine province of Nueva Ecija, presented his point of view of a farmer's credit needs in an Asian Productivity Organization (APO) seminar. Among his recommendations are a lessening of the red

tape that accompanies loan applications, providing loan supports and marketing at the village level, and improving the credit delivery system, such that suppliers of farm inputs will not get the greater part of the benefits for farm credit. These are some of the issues that a cooperative, specifically, multipurpose cooperatives, address. Far from being an isolated component of rural development, credit is tied in with all the other aspects of agricultural production.

2.3.5 Marketing Cooperatives

The second major type of cooperative is the marketing cooperative. Van Dooren (1982) describes its objectives as

> to bring together the relatively small amounts produced by individual growers, to sell them to the wholesaler or exporter at the best obtainable price. The producer does not have to worry about disposing of his produce; whilst the cooperative, by bringing together the small lots of separate producers, can exercise a great influence on the price and take for itself the profit which would otherwise go to the middleman/dealer (van Dooren, 1982:100).

Van Dooren considers the competitive pricing of cooperative produce with that of other producers, as the most vital factor in determining the success of the cooperative.

Marketing cooperatives are particularly useful in the sale of cash crops, where large producers have a distinct advantage over small farmers. A marketing cooperative can provide services to the small farmer which could include any or all of the following: channelling the goods to the consumer, wholesaler or exporter; grading the quality of the produce, processing; transport and storage; and the manufacture of related goods, e.g., cheese processing in a dairy cooperative. These services could perhaps be provided by the small farmers for themselves, but at considerably greater cost than it would take to join a marketing cooperative.

In the Philippines, marketing farm produce is the concern of two government agencies, the National Food Authority (NFA), and the Food Terminal Inc. (FTI). The NFA is basically a consolidation of the former National Grains Authority (NGA) and the FTI. The NFA is authorized to register, license and supervise parties engaged in marketing. The FTI is a market complex for producers and wholesalers (Calayag, 1989:329-330).

Aside from the NFA and the FTI, the organizations involved in marketing agricultural produce in the Philippines, are farmers' associations known as Area Marketing Cooperatives (AMCs). These are composed of about 10 Samahang Nayons (SNs) which are in turn composed of at least 15 farmers each. The SNs and the AMCs are cooperatives formed by the government to work with its land

reform program. Although the AMCs were expected to handle large proportions of produce for marketing, it has been charged with inefficiency by a number of members. Because of this, marketing still remains largely within the hands of private traders and middlemen (Calayag, 1989:154).

The National Food Authority (NFA) in collaboration with the Japan International Cooperative Assistance (JICA) has a programme designed to help farmer organizations strengthen their marketing capabilities. The terms are specified by Rotor (1989:228), and include such items as payment on a soft loan basis, no interest or price escalation clause on the use of processing equipment (although the NFA owns the equipment until fully paid for by the cooperative), training in technical and marketing aspects of the facilities granted, and the registration of the farmers' organization with the Bureau of Agricultural Cooperatives Development (BACOD) or the Securities and Exchange Commission (SEC) for at least two years.

Rotor's (1989:231-232) discussion of the marketing system within the Philippines also includes a situational survey of postharvest facilities of cooperatives. Among the most salient points are: that rice is the main crop of 88 percent of these farmers' organizations, 70 percent are engaged in group marketing, farmers' organizations are active in almost all stages of production, high interest on loans is the most common problem, and that most farmers' organizations would like to have training in cooperative and entrepreneurial development, postharvest technology and marketing.

2.3.6 Production Cooperatives

A production cooperative may be the most all-inclusive type of cooperative. This is because even the resources for growing the crop, including labor, are pooled together. Credit, supply and marketing are often included in the services provided to members, but at a considerable loss of entrepreneurial freedom. Galeski (1975) distinguishes collective farms into those created by ideology, and therefore puts higher value on non-economic goals; those created by landless families, those organized by governments as a matter of state policy; and those organized by farmers who want to get the advantage of larger operation.

This classification of cooperative farming is ideal, however. In reality, cooperative farms of all types or a combination of types could be observed in a single country, sometimes in the same organization. Although not a production cooperative, the Dayap Credit Cooperative and Development, Inc., the focus of this study, incorporates some of its aspects in its operations as a multipurpose cooperative.

2.3.7 Multipurpose Cooperative

A multipurpose cooperative is one that tries to offer a varied assortment of services to its members, in lieu of having separate cooperatives for different farming activities. Van Dooren (1985:77-83) discusses the advantages and disadvantages of having a multipurpose cooperative instead of a cooperative that concentrates on a single purpose. Among the advantages of a multipurpose cooperative mentioned are comprehensive, year-round service to its members, the avoidance of underemployment of cooperative employees, better over-all insight into the economic situation of the member, and closer contact between the members. The disadvantages of a multipurpose cooperative lies in the complexity of its accounting system, the difficulty of finding a competent manager, and the risks of confusing its functions, e.g., credit with marketing payments. According to van Dooren, the greatest risk of all is a conflict of interests between members who avail of the various services within the cooperative.

Although the ultimate decision on a cooperative's functions belongs to its members, van Dooren suggests that as far as operational costs are concerned, a multipurpose cooperative is cheaper to maintain than several different single-purpose cooperatives.

CHAPTER 3

STUDY AREA AND RESEARCH METHODS

3.1 Selection of the Study Area

The area of study includes the six municipalities serviced by the Dayap Credit Cooperative and Development, Inc. (DCCDI). These towns are Calauan, Nagcarlan, Victoria, Pila, Sta. Cruz and Bay. The cooperative office is located in Dayap, a barangay (village) within Calauan, in the Laguna province. Laguna Province, in the Southern Tagalog region, is one of the Philippines' major rice producing areas.

The DCCDI was selected for the study on the recommendation of the Land Bank of the Philippines (LBP). Although the researcher had some reservations about investigating a cooperative within the Laguna area for reasons to be explained later, the Land Bank assured her of DCCDIs status as a cooperative worth examining. Laguna is the site of the University of the Philippines at Los Banos (UPLB) campus, as well as the International Rice Research Institute (IRRI). As such, it has greater access to agricultural research and the benefits that proximity to such institutions afford than most other areas in the Philippines. This lack of representativeness was considered a limitation, as was mentioned earlier. However, the DCCDI is an independent cooperative that has a record for both efficient service to its members and good credit with the Land Bank. In this sense, it was an ideal subject for a case study of a Philippine cooperative.

3.1.1 Agriculture in the Laguna Province

Laguna, about 60 km. south of Manila, is more fortunate than most other Philippine provinces as far as agriculture is concerned. As Smith and Gascon (1979) characterize Laguna's farmers,

> with average rice yields of 4.1 tons/ha. Per crop, vs. 1.9 for the nation, they are obviously not representative of the Filipino farmer (Smith and Gascon, 1978:3).

The presence of two institutions, UPLB and IRRI have also left their mark on Laguna's agriculture. These two institutions are greatly involved with agricultural research, the most prominent of which are the development of high yielding varieties (HYVs) of rice. Since their introduction in 1966, these varieties were eagerly adopted by Laguna's farmers. By 1975, HYVs were used by 100 percent of the farmers in the area.

Land reform is another aspect of rural life in which Laguna could be considered more progressive than other Philippine provinces. By 1978, 68% of Laguna's farmers had become leaseholders instead of shareholders. This decline in the institution of landlord-tenant agriculture may be the impetus for more advanced farming systems in the area. With freedom from tenure insecurity, farmers have branched out into growing produce that could benefit them in the long run. Leaseholders can grow crops other than rice. Multiple cropping is practised, a condition which the sharecropping arrangement makes almost impossible. The status of land reform in Laguna can also be gleaned from the farm sizes. Large estates are not as pervasive as in other parts of the country, as can be observed from the sizes of holdings of crop-growing members found in the cooperative's list.

A study on changes in rice harvesting systems (Kikuchi et Al, 1979) in Central Luzon and Laguna, illustrates that even in its **regressive** aspects, agriculture in Laguna is more socially beneficient than other areas. There are three main harvesting systems in the Philippines: the **tilyadora**, **hunusan**, and **gama** systems.

The tilyadora system is so called after the mechanical thresher of the same name. Harvesting is done by landless laborers on a fixed wage. The harvested rice plants are brought to a tilyadora, which is usually owned by a landlord or merchant, for threshing. This harvesting arrangement is more centralized, and more dependent on capital equipment than either hunusan or gama. It is also still the predominant harvesting arrangement in Central Luzon, although hunusan is slowly gaining in popularity.

The hunusan system uses the hand-beating method for threshing and requires an output-sharing contract. It is more labor-intensive than the tilyadora arrangement. It also promotes greater social interaction between the small farmers and landless laborers.

Gama is a variation of hunusan, wherein the farmer contracts the landless laborer to help with the weeding which is tied in with harvesting rights. Gama provides a certain form of insurance, since a landless laborer who agrees to help with the weeding is assured of being allowed a share of the harvest.

Laguna's small farmers have practiced hunusan, and later gama, earlier and more extensively than Central Luzon. Since most leaseholders till their own land and live within the village where landless laborers also live, maintaining more equitable social relations is necessary. Central Luzon's

haciendas are owned by absentee landlords who do not have to maintain such social ties with landless laborers. Thus, the social interaction of communal harvesting was abandoned for the technical efficiency of the tilyadora. Laguna has gone the opposite way, and other parts of the country followed.

Patterns of agricultural credit have also been studied fairly intensively in the Laguna area. Within the UPLB system are the College of Economics and Management (CEM) and the Agricultural Credit and Cooperative Institute (ACCI), both of which often conduct studies in the barangays surrounding the university. The ACCI itself is also a cooperative for university personnel and other Los Banos residents, although research and teaching are among its functions.

It is in Laguna that the DCCDI has grown and expanded. Whether the UPLB and IRRI have affected it much is almost taken for granted, but it has also developed on its own (Appendix 1). Although Laguna cannot be considered the typical Filipino province as far as agriculture is concerned, it can be, as Smith (1979:3) puts it, "interesting as (a) model(s) of possible future developments."

3.2 General Description of the Study Area

Calauan is located about 5 km. south of the University of the Philippines at Los Banos. It is predominantly a rice-producing area, except for the occasional coconut grove. Most of the land stretching from UPLB to the Calauan town proper are used as experimental plots by IRRI and agricultural companies. Calauan itself is nestled at the foot of a mountain to which it lends its name, although the cultivated areas are flatlands. Dayap, 1 km. from the town proper, is mostly rice-growing area.

Laguna is known to have generally cooler weather than the greater part of Luzon, with temperatures of around 27^{o} - 33^{o} C. Like the rest of the Philippines, it has two seasons. The dry season is from October to May, the wet season is from June to September. For most farmers who practice multiple cropping, or who grow two crops of rice within the year, the first crop is usually planted in April or May and harvested in mid-July to August. This is also the period when transplanting of the second crop occurs. Rainfall averages 160 mm. per annum. Tropical storms and typhoons occur on an almost regular basis.

The rice fields in Calauan are completely irrigated. Farmers plant modern high-yielding varieties from IRRI and UPLB's College of Agriculture. During the researcher's stay in the area, farmers

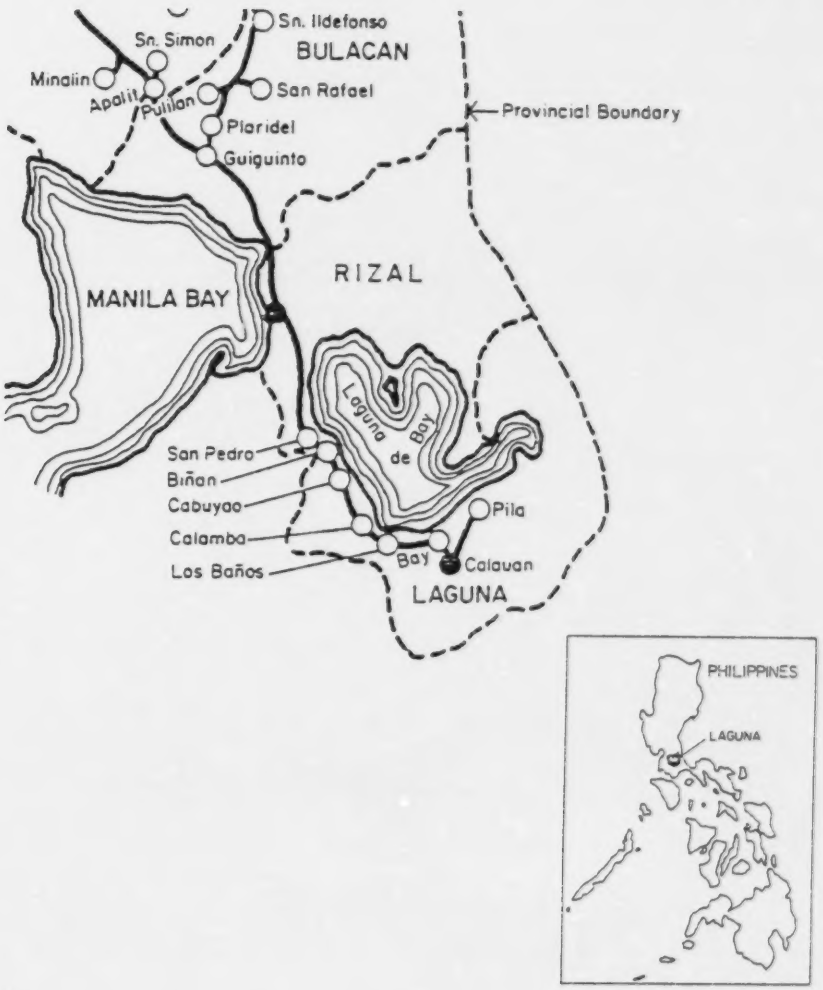

FIGURE 3.1

MAP OF THE STUDY AREA

THE COOPERATIVE OFFICES ARE LOCATED IN CALAUAN

were discussing the characteristics of the newest IRRI variety, which some of them have "tried out" in their farms. Aside from rice-farming, Calauan also has a sizeable duck-raising cottage industry, duck eggs being a popular Filipino delicacy.

The dialect spoken in Calauan is Tagalog, also called "Filipino" when it is referred to as the Philippine national language. Although the research was conducted in Tagalog, many farmers have some knowledge of English, and all of the cooperative's administrative staff are fairly proficient in the language. The majority of the cooperative's administrative staff are graduates of a local college, or secondary school graduates. The manager, N. Fortuna, was formerly a researcher at the University of the Philippines at Los Banos. The chairman of the cooperative, V. Marciano, simultaneously works as a researcher at IRRI as well as being a small farmer himself.

Dayap Credit Cooperative and Development, Inc. was established in 1972, with only 53 members. These original members were all resident farmers in Laguna, who with help from the Philippine Rural Reconstruction Movement (PRRM), formed a credit union. From these beginnings, the DCCDI has increased both its functions and the number of its members. As mentioned earlier, six municipalities, both within and in the surrounding areas of Calauan, are served by the cooperative.

At present, the DCCDI lists among its services: credit union, production loan, rice milling, rice trading, food loan, garments sewing, drug and **sari-sari** (general) store, emergency loan, and providential loan. The services offered are concentrated in Dayap, where members from other areas go for most transactions. Hauling and transporting produce for marketing purposes often require different arrangements, however. Because of the lack of transport, most members of the cooperative request for "pick-up" of the newly harvested crop. Processing, grading, and storage of rice are done at the cooperative's headquarters. Further details regarding DCCDI's background is presented in Appendix 1.

The Dayap cooperative was admittedly, chosen for study by the researcher, just as it was recommended by the Land Bank, because of its "model" aspect. As mentioned earlier, this could be due to its ideal location in Laguna. However, it could also be due to other social rather than economic factors which will be the focus of this study. Not all cooperatives within the Laguna area are doing better than or as well as the DCCDI. This in itself makes it an object of interest.

3.3 Selection of the Sample

3.3.1 Sampling Framework

The six municipalities served by the DCCDI were all included in the survey. Aside from Calauan, where the cooperative's office is located, the other five municipalities were also within Laguna and are very accessible from the cooperative's office. These municipalities include Pila, Bay, Victoria, Santa Cruz and Nagcarlan. A few members are from out of the province. The respondents were randomly selected from a list of the cooperative's members. Averages of the members' gender, municipality and land cultivated were taken to help ensure representativeness of the sample.

The majority of DCCDI's members are from Pila, the area closest to the University and IRRI. The second largest group of members are from Victoria, closely followed by the group from Calauan. Santa Cruz has the next largest group of members, after which is Nagcarlan. Bay has the fewest number of members within Laguna. The three members who live out of the province are from Cavite, a province north of Laguna.

The study was based in Calauan, Dayap in particular, where the DCCDI office, rice granaries and sari-sari store are located. It is the center of operations of the cooperative. Also, observation of the day-to-day activities within the cooperative's office was considered important. One of these activities is the procedure for loan applications of the members. Another activity, which occurred later in the study, is the election of the cooperative's Board of Directors. The survey itself, however, was conducted both within the DCCDI's office and in the homes and farms of the cooperative's members.

3.3.2 Respondents Sample

Choosing the respondents for the survey was facilitated by several factors. The first of these is a list compiled by the DCCDI's employees which was made available to the researcher. The list includes the names of the members, the area where they farm and their home addresses, and the size of their landholdings. From this list, it was relatively easy to group members according to where they come from, and then, by simple random sampling, choose the respondents for the survey.

The second factor that facilitated the way the survey was conducted was the proximity of the respondents. Farm houses in Laguna are situated quite closely to each other, except in a few cases wherein the farmer's house is isolated by the surrounding rice fields. In the areas covered by the survey, however, it was not difficult to walk a few meters to where the next respondent lives.

The third factor that helped in the data collection was the DCCDI office itself. Some of the respondents were scheduled to pay their loans and/or to apply for new loans on a particular day. It became a matter of convenience for the researcher to interview the respondent on that day, before or after business with loan officer was done.

Simple random sampling was chosen to give all the members of the cooperative a reasonable chance of being included in the survey. One hundred respondents were chosen from 2,086 members (as of February, 1992, Dayap Credit Cooperative and Development Annual Report, 1991:22). According to the cooperative's manager, DCCDI is planning to limit the number of new members, to provide their existing members with more personalized and sufficient service. Over-expansion is guarded against by encouraging new applicants from more distant areas, in some cases, other provinces, to join cooperatives closer to their residences.

The respondents chosen were all listed in DCCDI's roster of members. Presumably they are the heads of their respective households. Although all the respondents are from rural households, not all of them are farmers. Some are beneficiaries of production loans for animal husbandry or cottage industries. As far as the study is concerned, all members of DCCDI were considered as potential respondents regardless of their status or role within the cooperative.

3.4 Data Collection

3.4.1 Methods Used for Data Collection

The greater part of the study relies on direct information from members and officers of the cooperative. For this reason, the interview was the preferred data collection tool. A number of questions in the interview schedule were open-ended to allow the respondents to express their full opinions. The face-to-face interview also allowed the researcher to detect nuances in replies and if necessary, probe for more informative answers. The interview, as a method, allows this probing to be done immediately, with a minimum of misleading information due to questions being misunderstood. By the same token, the respondent can also request the interviewer to clarify the questions so the appropriate answer can be given.

In a certain sense, the interview was not just the preferred method of data collection, it was the **only** feasible tool under the circumstances. The DCCDI office did not have a telephone, and neither did the cooperative members. The use of a mailed questionnaire was a possibility, but it would have taken too long to collect data. Furthermore, although the Philippine postal system is quite efficient,

there was not enough evidence of adequate return rates of mailed questionnaires. Both for its advantages and the limitations of other data collection modes in the context of this particular study, the interview was the best possible choice.

The literature on and records of the cooperative are also a source of data. The cooperative keeps records of its transactions and other material pertaining to its operations. The officers and members of DCCDI were accomodating enough to allow the researcher a look through these materials, thus enabling her access to some information which would otherwise be unavailable. This material is an important part of the analysis of the cooperative.

3.4.2 Design of the Interview Schedule

In an article on problems of classification, Lazarsfeld and Barton (1955:84) discuss how the categorization of data affects how social phenomena are conceptualized. Since there are no "ready-made theoretical categories" to explain raw data, the researcher must form these categories before anything else. The requirements of a good classification scheme are summarized by Lazarsfeld and Barton into four attributes. These are articulation, or the progression from general to specific, logical correctness, adaptation to the structure of the situation and adaptation to the respondent's frame of reference. As much as possible, the interview schedule for this study was prepared taking these factors into consideration. The preparation of the questionnaire followed four steps. These include choosing the questions, arranging the presentation of the questions into dialect, and testing the questions.

3.4.3 Selection of the Questions

The questions for the study were chosen to provide both an adequate socioeconomic profile of the respondent and a description of their involvement with the cooperative. There are structured questions in the interview schedule, to articulate more easily the characteristics of the respondents. The questionnaire was prepared with the purpose of getting as much relevant information as needed while taking as little of the respondent's time as possible. For this reason, structured questions were used for inquiries which could be answered by a yes or no, or could be answered with a quantitative reply.

The questionnaire also had open-ended questions, so the respondent could better express a greater variety of responses which could not be readily anticipated by the researcher. The open-ended

questions were used mostly to elicit the respondent's opinion about, and involvement with, the cooperative. For this reason, open-ended questions were chosen with the purpose of not "putting answers in the respondent's mouth."

In conducting the interview, structured and open-ended questions proved to have their specific uses.

3.4.4 Format of the Interview Schedule

In attempting to put the questions in order, the researcher took to mind Lazarsfeld and Barton's attributes of a good classification scheme, particularly articulation and logical correctness. For this reason, the interview progressed from the general inquiries about the respondent's socioeconomic characteristics, to the status of the farming operation, to more specific questions about the cooperative itself. The sections within the interview schedule were ordered to provide the respondents with as gradual and logical a progression in the topics covered as the researcher thought possible.

3.4.5 Translating the Questions

The interview schedule was originally in English, for purposes of consultation with University of Alberta staff. The six-page interview schedule was translated into Tagalog upon verification of the cooperative's location.

3.4.6 Testing the Interview Schedule

The questions in the interview schedule were translated by the researcher. Fortunately, the dialect was Tagalog. Unfortunately, there were neither time nor resources for an extensive pretest. Consultation with two Calauan farmers regarding proper wording, content, and format of the interview schedule was done. Aside from minor changes in the specific meaning of certain agricultural practices, the interview schedule was considered viable.

The researcher also consulted with the cooperative's manager to verify some facts that should hold true for all cooperative members. This was done to minimize the number of questions put to each respondent, to leave more time for free discussion, if possible.

3.4.7 Items of the Interview Schedule

The questionnaire was divided into five sections. The first section is concerned with the socioeconomic profile of the respondent, including tenurial status. The second section deals with land use, while the third section is on labor needs. The fourth section deals with the respondent's income and

expenses. Finally the fifth section is on services, both those provided by the cooperative to the respondent, as well as those volunteered by the respondent to the cooperative. These questions were formulated to adhere closely to the study objectives.

The first section asks the respondent's name, age, gender, occupation, level of formal education and number of family members. Sections two, three, and four are for the respondents who answered farming as their main occupation. The fifth section, which is about the cooperative, was like the first section, asked of all the respondents.

3.4.8 Actual Collection of Data

The study was completed with the help of interviewers from the town itself. These individuals have had some experience with interviewing, one of them had been working with the University of the Philippines as a research aide, with interviewing as her main duty. One afternoon was spent briefing the interviewers about the schedule. The researcher also conducted interviews herself. Completed interview schedules were checked for errors and inconsistencies. These were also reviewed for clarification purposes. The respondents for the most part were very accommodating to the researcher and reportedly, to the other interviewers.

3.4.9 Problems of Data Collection

The process of data collection was facilitated by many factors. The greatest among these was the familiarity of the researcher and other interviewers with the area and local customs. However, problems are unavoidable. In this case, time was the greatest constraint. Finding a common time for the interviewer and the respondent to talk was not easy. Contrary to popular belief, farmers and other rural inhabitants do not have all that much leisure time. Furthermore, aside from the researcher, all the interviewers were only working part time. The problem of scheduling interviews was partly solved by the general elections of the cooperative's Board of Directors, and by the application for loans, as it was the start of the planting season. Because of these "pre-scheduled" meetings, the interviews were easier to arrange.

3.5 Data Processing

The first four sections of the interview schedule had mostly structured questions. The answers of the respondents were expected to fall within set categories. These categories were set based on past research and information from the employees of the cooperative concerning some common characteristics of the cooperative members. The open-ended questions elicited more varied responses

which are necessarily more difficult to categorize. The answers for open-ended questions were categorized according to similarities and key words, and were subsequently assigned specific numbers. These numerical codes were assigned to facilitate the transfer of data to the computer.

3.6 Data Analysis

Analysis of the data was done using the "SPSSx" statistical package. The first part of the analysis, on the socioeconomic characteristics of the respondents, used frequency counts, percentages and means. The second part used multiple regression to test the hypotheses. The degree of relationships among the variables was tested at the significance level of 0.05.

3.7 Reliability and Validity Issues

To ensure that the answers of the respondents were both reliable and valid, the interview schedule was designed according to the guidelines suggested by Lazarsfeld and Barton (1955) of articulation, logical correctness, adaptation to the structure of the situation and adaptation to the respondents' frame of reference.

For articulation, the interview schedule was worded such that answers to the initial question would be verified by the succeeding questions. For example, the question on the number of household members was further clarified by questions on the number of persons in the household in specific age groups, and by the marital status of household members.

To ensure logical correctness, the interviewers were given explicit directions on what to look for in some of the respondents' answers. For instance, the loan that a respondent might say he receives could be a smaller amount than what is actually received. In this case, loans in kind, e.g., fertilizer for farms, feeds for animal husbandry projects, should be included in the answer.

The familiarity of the interviewers with the area, with the local customs, and in some cases, with the respondents themselves, was a contributing factor in ensuring the adaptation to the structure of the situation in which the interview was conducted.

Finally, adaptation to the respondents' frame of references was aided by the input of farmers within the area who helped in formulating questions and translating terms in the final version of the interview schedule.

CHAPTER 4

DATA ANALYSIS

4.1 Sociological Profile of the Respondents

The Dayap Credit Cooperative and Development, Inc. (DCCDI) is a multipurpose cooperative. As such, its operations are not entirely geared towards agricultural production. Nevertheless, most of its members are involved in agriculture. A small percentage of the respondents earn their living in other ways, while many are farmers and maintain a secondary occupation simultaneously. Tables 4.1-4.17 provide a summary of the respondents' socioeconomic characteristics.

4.1.1 Membership

The 100 respondents of this study were either the household head, or the family member in charge of household finances. All the respondents were registered members of the DCCDI. Of these, 62 percent are male and 38 percent are female. These figures illustrate that the female population in the barangays served by the DCCDI are not necessarily ignored due to gender. However, the list of members with loans from the cooperative in 1991, 268 are male while only 147 are female. This may be partly explained by the traditional status of men as the titular head of the family., but it does not imply the uninvolvement of women. As one of the conditions of membership, an applicant of either sex must have the consent of his/her spouse before applying for a loan.

4.1.2 Age

In determining the average age of the respondents, it was found that although none of the members was younger than 21 years old, the oldest respondent was well on his way to 90 (Table 4.1). The median age bracket is that from 40-49 years old, with 34 percent of the respondents in this category. The next highest percentage of members at 22 percent is in the 30-39 years old age bracket. Results of the statistical analysis done on age shows that the mean for the cooperative's members is 46.42, with a standard deviation of 12.43. The average age of respondents could reflect both the general "household" age and the average age of those involved in agriculture in the area.

In checking the total number of household members against the number of single and married members of the family, it was found that many of the younger generation have gone into work that is not necessarily connected with agriculture, nor have they joined the cooperative, thus the lack of representation of their age group in the survey. A possible explanation for this phenomenon is the

increasing availability of other alternatives for financial advancement. Many rural-based Filipinos have gone abroad or to Manila to work in professional and service occupations. The separation from family and village is not always seen as positive. However, it often seems to be the only option when decreasing farm sizes and increasing populations limit farming opportunities.

TABLE 4.1

AGE OF RESPONDENTS

Item	Percentage
20-29	9
30-39	22
40-49	34
50-59	17
60-69	16
70-79	1
80-89	1
TOTAL	100

4.1.3 Education

The respondents' educational attainment varies from the 3 percent who did not have any formal education or did not finish the elementary grades, to the 21 percent who have attained their university degrees (Table 4.2). However, the majority of respondents, at 47 percent, had finished the elementary grades. The next highest percentage of respondents, at 23 percent, had gone through high school. Six percent of the respondents have attended vocational schools or local colleges.

The educational profile of the respondents show that the sample is a relatively well-educated group for a rural area. The respondents who did not finish elementary school are nevertheless literate. The high educational attainment of the respondents could be explained by the proximity of Dayap to institutions like the University of the Philippines at Los Banos. The university attracts a

large number of students from the area. As well, many of the cooperative's staff has had some experience working with the university in various capacities. It could also be an indication of the great value Filipinos place on education. Whatever the reason, formal education is not considered a requirement for membership in the cooperative.

TABLE 4.2

EDUCATION OF RESPONDENTS

Item	Percentage
No Formal Education	3
Elementary Grades	47
High School	23
Vocational College	6
University	21
TOTAL	100

4.1.4 Household Size

Almost half (49%) of the respondents headed household with four to six members. Larger families with seven to nine members comprised 27 percent of the households surveyed (Table 4.3).

The large percentage of moderately-sized families in the area may be due to the importance given to education, and consequently, the expense of sending children through school. It may also be due to the small landholdings, which cannot be divided further without seriously reducing production capabilities. It is interesting to note that most of the respondents with large families were still only in their forties. This may reflect the lack of importance given by the government to family planning, which in turn may reflect the influence of Roman Catholicism on government policies.

TABLE 4.3

TOTAL NUMBER OF HOUSEHOLD MEMBERS

Item	Percentage
1-3	16
4-6	49
7-9	27
10-12	6
13-15	2
TOTAL	100

4.1.5 Main Occupation

A great majority, 88 percent of the cooperative's members, are farmers, with the remaining 12 percent in largely service occupations like tailors and shopkeepers. The main description of the DCCDI notwithstanding, its main function appears to be providing loans for agricultural production. Those who do not avail of these loans because they are not involved with agriculture join the DCCDI for its other livelihood projects, such as garments manufacturing. A number of respondents take advantage of the various services offered by the cooperative simultaneously, as they also hold secondary occupations. A list of the respondents' main occupations is presented in Table 4.4.

TABLE 4.4

MAIN OCCUPATION OF RESPONDENTS

Item	Percentage
Farmer	88
Non-Farmer	12
TOTAL	100

4.1.6 Secondary Occupation

The majority of respondents (68%) were farmers without any secondary occupation. However, 22 percent of the respondents who identified themselves as farmers also listed other sources of income, joining 12 percent of the respondents whose livelihood does not come primarily from farming. Some of the occupations listed were employee or professional at seven percent, poultry and duck-raising at five percent, and livestock-raising at ten percent (Table 4.5). It was found that especially among respondents whose main occupation is farming, urban-based secondary occupations like civil engineer, teacher or accountant were not uncommon. A few of these respondents are retired or semi-retired from their secondary occupations. Others are farming because of their ties to the village and the support services and financing they are now able to avail of from the cooperative.

TABLE 4.5

SECONDARY OCCUPATION OF RESPONDENTS

Item	Percentage
Employee/Professional	7
Poultry/Duck Raising	5
Livestock Raising	10
Buyer-Seller/Shopkeeper	1
Teacher	2
Tailor/Seamstress	2
Security Guard	1
Laborer	1
Craftsman	1
Farmer Only	68
TOTAL	98

4.1.7 Tenurial Status of the Respondents

Since one of the major conditions for acceptance into other Philippine cooperatives, such as the government-initiated Samahang Nayon, is land ownership, tenure type is an important aspect in measuring a cooperative's accessibility for membership. Table 4.6 presents the tenurial status of the cooperative members interviewed. Of the respondents in the survey, 73 percent were leaseholders. Although not owners of the land they cultivate, leaseholders could decide the kind of crop and management practices in their holdings. Payment to the landowner is in the form of a fixed sum to cover a specific period of time.

The leaseholder has certain advantages over other forms of tenured farmers. The leaseholder has enough security to be able to invest in long-term inputs for his farm. Eventually, if the land

reform program of the government is successful, and financial stability is possible, the leaseholder might even own the land he/she cultivates. In the hierarchy of Philippine farmers, being a leaseholder is the next best status to being a landowner.

The second largest group, at the much smaller percentage of eight percent is those of owner-operators. Another eight percent of the respondents were either not farming at all, or had no specific tenure arrangement with a landowner. Landless agricultural workers, composing six percent of the respondents interviewed, either receive a fixed wage for weeding and harvesting the crops of other farmers, or they may receive a percentage of the harvest for their labor. The inclusion of these two extremes in the cooperative, ownership of and lack of access to land, shows openness on its part in accepting different strata of the farming community as members. However, the relatively small percentage of both groups reinforces the theory that tenure still plays a large part in being able to obtain production loans.

Share tenants cultivate land owned by an often-absent individual or corporation and pays for the privilege of using this land by giving up a percentage of the crop. Surprisingly, five percent of the respondents were share tenants. Share tenancy has supposedly been abolished by the most recent land reform law, Executive Order No. 299 (Hayami et Al, 1987:2), yet based on the respondents' answers, it seems to have survived, although not to the extent that it has as recently as five years ago.

The first hypothesis of the study states that the cooperative which does not require land ownership for membership is likely to attract more farmers to join. From the large percentage of leaseholders, share tenants and landless laborers among the respondents, it can be safely said that land ownership is not a requirement for DCCDI membership. However, access to land, as 73 percent of the respondents who are leaseholders illustrate, may still be important in acquiring production loans. Security of tenure may affect the ability of the loan applicant to pay the loan, and this may, however indirectly, affect the cooperative's decision to provide credit. Whether tenure is a consideration in applying for production loans in the cooperative will be discussed in the test of hypothesis.

TABLE 4.6

TENURE STATUS OF RESPONDENTS

Item	Percentage
Harvester/Landless Laborer	6
Share Tenant	5
Leaseholder	73
Owner-Operator	8
Other (non-Farmer or has other arrangement)	8
TOTAL	100

4.2 Economic Profile of the Respondents

As noted earlier, the majority of respondents and DCCDI's members are farmers. This means that their main source of income is agricultural production, and does not imply that they belong to any particular tenure group. Tables 4.7 - 4.16 provides a summary of the economic situation of DCCDI's farmer cooperators.

4.2.1 Rice Yield

A full 90 percent of the respondents reported harvesting rice for the two planting seasons of the year. These rice yields range from 14 to 1990 cavans, a cavan being a volume unit of measurement used by Filipino farmers that can contain 45 to 50 kilograms. The average (mean) yield of rice harvested per year is 357.03 cavans. However, since there is a very large standard deviation (Table 4.7), the mean merely illustrates the diversity of the respondent's production capabilities. Although the respondents' average yields could be considered high by Philippine standards, it is also a yield possible only with a large amount of inputs and intensive cultivation. The cooperative is, for most members, the most accessible source of inputs for such rice yields.

4.2.2 Pineapple, Coconut and Other Crops

Prior to the survey, an inquiry was made on the important crops of the area served by the cooperative. From this inquiry, it was found that the other cash crops of DCCDI's members includes coconut, pineapple, citrus and other fruit crops. The extent of cultivation of these crops was therefore included in the survey. The respondents included one pineapple grower, six coconut planters, and three growers of lanzones, a fruit crop. There are no citrus growers among the respondents. The income from these crops are presented in Table 4.7. Figures were converted into pesos, as the standards of measurement for these products are not uniform. The inclusion of farmers other than rice-growers in the survey illustrate the "multipurpose" character of the DCCDI. Although the fruits mentioned above are grown as cash crops, the growers of these crops are seldom if ever included in cooperatives which concentrate on rice production.

TABLE 4.7

YIELDS OF VARIOUS CROPS GROWN BY COOPERATIVE MEMBERS

Item	Yield(Mean)	Std. Dev.	% of Respondents Cultivating Crop
Rice	375.03*	95.74*	78.0
Coconut	151.04**	1048.35**	6.0
Pineapple	1000.00**	1000.00**	1.0
Lanzones	753.78	4427.32**	3.0

* in cavans
** in pesos

4.2.3 Livestock and Poultry

In a preliminary interview with the cooperative's administrators, it was found that many of the farmers in the cooperative raise livestock and poultry to augment their incomes. Some members of the cooperative consider themselves as primarily grain farmers, with animals as an additional source

of livelihood. Others consider the raising of carabaos, also known as water buffaloes, cows, pigs, ducks or chicken as their main source of income. A summary of the livestock and poultry projects of cooperative members is presented in Table 4.8.

The most frequently raised animals are pigs, which are kept by 30 percent of the respondents, and ducks, which are kept by 14 percent. Carabaos are maintained by 11 percent of the respondents, and are used mostly as draft animals. Cattle, raised by 13 percent, were kept both for milk and for resale to meat processors.

A number of respondents mentioned that animal husbandry is their only means of joining the cooperative. Since they do not own land, nor are they able to rent land for growing crops, the raising of pigs or ducks in backyard lots seems to be their best alternative source of income. Yet even in this, the cooperative examines the circumstances of the loan applicant. Whether the prospective member has enough space in his yard for keeping the animals will largely determine whether the loan would be approved or not. Training in raising the animals is also required. Thus, the risk in supporting the animal husbandry project is lessened. The cooperative also reduces the risk by giving the loan in kind. Feeds, medicine and starter mixes are provided to the member as the need arises. Cash loans are avoided as often as possible. According to a cooperative employee, this is done to ensure that the loan is used for project purposes. If the member needs cash for other reasons, another kind of loan has to be applied for. The absence of land as collateral necessitates the use of other means to ensure payment on the loan.

TABLE 4.8

LIVESTOCK AND POULTRY PROJECTS OF COOPERATIVE MEMBERS

Kind (currently raised)	Number of Animals (Mean)	Std. Dev.	% of Members with Projects
Carabao*	.110	.469	6.0
Cattle	.140	.586	7.0
Pigs	.920	2.596	21.0
Ducks	23.300	124.90	8.0

* the Carabao is also known as Water Buffalo. It is often used as a draft animal.

4.2.4 Size of Land Holding

Since the majority of respondents and the cooperative's members are farmers, it was considered necessary by the researcher to find out how much land was cultivated by this group. In the earlier question of tenure, 73 percent replied that they were leaseholders. An additional five percent were share-tenants, and eight percent were owner-operators. Thus, 86 percent of the respondents had some access to land.

In the Philippines, agricultural land is divided by hectares. One hectare is approximately 2.5 acres. The number of hectares a farmer cultivates does not necessarily indicate the number of hectares owned. A few farmers can in fact be classified under two or more tenure types. The farmer who grows rice on four hectares of land, might have two hectares he holds a lease on, one hectare of which he shares the harvest with a landlord, and one hectare he has completed payments on, in effect making him a leaseholder, a share-tenant, and an owner-operator all at once. The relationship between cultivator and land becomes even more complicated when the landless worker is brought into the picture. As the latest and most disenfranchised rung in the rural social ladder, the landless worker is often in charge of weeding, harvesting, and other farm operations. For his labor, a landless worker receives either a fixed wage or a percentage of the profits (Ledesma, 1982).

Because of the variety and complexity of tenure arrangements among the cooperative members, the researcher found it necessary to ask how many hectares are cultivated, rented, owned, rented out and harvested by the respondents. Although there are some arrangements which the majority of respondents seem to practice, it could also be seen that many have different degrees of "rights" to the land they cultivate, simultaneously. Table 4.9 shows the summary of the respondents' hectarage.

TABLE 4.9

HECTARES UNDER CULTIVATION BY COOPERATIVE MEMBERS

Item	Mean	Std. Dev.	Range	% of Respondents
Hectares Cultivated	1.64	0.92	1-4	87.0
Hectares Rented	1.44	1.61	0.30-8	68.0
Hectares Owned	0.11	1.58	1-5	5.0
Hectares Rented Out	0.03	1.18	0.50-1	4.0
Hectares Harvested	0.53	2.29	1-20	15.0

From Table 4.4, it can be seen that although 88 percent of the respondents cultivate crops, Table 4.6 shows that only five percent own the land they till. It is interesting to note that six percent of the respondents harvested other farmers' fields. This implies that they also do the weeding, and possibly do other work that ensures a good crop as well. Ledesma (1982:33) mentions that there are at least two reasons why a landless worker who works as a harvester would want the cultivator of the crop to have a good yield. First, such a yield would imply a larger share of the harvest even if the harvester's percentage remains the same. Second, a good harvest may mean being given harvesting rights again, for the next year or the following season, as the cultivator may be better able to afford hiring harvesters. In any case, the presence of harvesters among the respondents lead the researcher to questions how the cooperative benefits those without access to land. It also leads to questions about the contribution of these members to the cooperative.

The average area cultivated by the respondents is 1.64 hectares. A frequency count of the hectarage cultivated by the respondents reveal that 46 percent cultivate two hectares, 26 percent cultivate one hectare, and 14 percent cultivate three hectares. Only one percent cultivates four hectares. The aforementioned figures indicate the almost uniformly small holdings of the cooperative members. As far as the respondents are concerned, not one could qualify as a big landowner. In fact, a meager 5 percent could be considered as landowners at all. The survey results regarding hectares cultivated by the respondents indicate that the cooperative does not ask for land ownership as a requirement for membership. However, the cooperative may still regard access to land as important, though not necessary.

4.2.5 Production Expenditures

The unavailability of land is only one of the farmers' concerns. Farmers need other forms of capital for production. The labour and materials needed for a good harvest, as well as the cash to pay for these, are the main reasons why farmers want to join the cooperative. To determine the expenses incurred by a farmer per planting season, the farm operations were delineated, and questions about the labor required and the costs of such labor were asked. The farm operations included are land preparation, which incorporates plowing and harrowing, irrigation, planting, weeding, harvesting and others, which was left for the respondent to specify. The respondents were also asked whether payments were given in cash or in kind. Table 4.10 gives a brief summary of the labour requirements of each farming operation during the wet season, while the following tables present the amounts paid for this labour, whether it be in cash (Table 4.11) or in kind (4.12). Table 4.13 provides a summary of the labour requirements during the dry season. Table 4.14 presents the cash requirements for these, as Table 4.15 shows payments in kind.

TABLE 4.10

LABOR REQUIREMENTS IN AGRICULTURAL PRODUCTION
DURING THE WET SEASON

Farm Operation	No. of Laborers		Person Days		% of Respondents Who Hire Labor
	Mean	Std. Dev.	Mean	Std. Dev.	
Land Preparation	4.58	6.52	3.44	2.83	88.0
Irrigation	.56	.95	.57	1.42	41.0
Planting	13.74	12.08	1.30	1.58	87.0
Weeding	18.63	31.57	3.08	2.91	80.0
Fertilizing	2.17	4.86	1.26	1.42	87.0
Harvesting	12.78	18.54	1.78	1.99	71.0
Other	.38	1.50	.14	.80	8.0

TABLE 4.11

CASH REQUIREMENTS FOR LABOR IN AGRICULTURAL PRODUCTION
DURING THE WET SEASON (IN PESOS)

Farm Operation	Mean	Std. Dev.	% of Respondents Who Pay in Cash
Land Preparation	286.88	647.87	82.0
Irrigation	8.87	22.21	14.0
Planting	59.39	27.55	87.0
Weeding	44.30	31.89	67.0
Fertilizing	34.11	34.04	53.0
Harvesting	1.79*	9.42*	6.0
Other	1.51	10.65	3.0

* in cavans, all other figures are in pesos.

TABLE 4.12

PAYMENTS IN KIND FOR LABOR IN AGRICULTURAL PRODUCTION
DURING THE WET SEASON

Farm Operation	Mean	Std. Dev.	% of Respondents Who Pay in Kind
Land Preparation	0	0	0
Irrigation	1.14*	9.90*	10.0
Planting	0	0	0
Weeding	0	0	0
Fertilizing	0.007**	0.07**	1.0
Harvesting	0.15**	0.80**	67.0
Other	0.30*	2.10*	4.0*

* in cavans of rice.
** figures represent a percentage of the harvest.

TABLE 4.13

LABOR REQUIREMENTS IN AGRICULTURAL PRODUCTION
DURING THE DRY SEASON

	No. of Laborers		Person Days		
Farm Operation	Mean	Std. Dev.	Mean	Std. Dev.	% of Respondents Who Hire Labor
Land Preparation	4.56	7.04	3.64	2.92	79.0
Irrigation	1.02	3.45	.65	1.47	42.0
Planting	12.52	11.76	1.01	.77	83.0
Weeding	16.53	28.78	3.14	3.04	74.0
Fertilizing	2.39	4.54	1.24	1.36	76.0
Harvesting	11.32	12.40	1.77	1.97	72.0
Other	0.11	0.58	0.05	0.41	4.0

TABLE 4.14

CASH REQUIREMENTS FOR LABOR IN AGRICULTURAL PRODUCTION DURING THE DRY SEASON (IN PESOS)

Farm Operation	Mean	Std. Dev.	% of Respondents Who Pay in Cash
Land Preparation	228.65	560.58	78.0
Irrigation	6.69	23.68	15.0
Planting	58.10	28.61	83.0
Weeding	42.68	32.38	64.0
Fertilizing	36.10	35.89	53.0
Harvesting	4.78	17.82	9.0
Other	1.63	10.70	4.0

Examining Tables 4.10 to 4.15 reveals some patterns in the labour expenditures of the cooperative members. A comparison between Tables 4.10 and 4.13, between Tables 4.11 and 4.14, and between Tables 4.12 and 4.15 show that the labour costs of producing rice during the wet and dry seasons are similar to each other. Aside from understandable differences, like the higher cost of irrigation during the dry season, expenditures of farmers during the year does not vary much.

Tables 4.11 and 4.14, which present the cash requirements for labour during the wet and dry seasons, show that of all farming operations, land preparation requires the largest cash outlay. During the dry season, labour costs for plowing and harrowing requires an average of 286.88 pesos per man day. However, the cost of land preparation is highly irregular among the respondents. For most, the costs mentioned cover labour alone, for others it includes the use of draft animals or machinery. The respondents' answers to questions regarding labour costs for land preparation illustrate why loans from the cooperative have to be received before the planting season begins, and in cash.

Two other farm operations which merit a closer look relates to weeding and harvesting. The **sagod** system is practiced by the majority of farmers in the area. In sagod, a landless laborer is often given the harvesting rights and approximately 10 percent of the harvest if the laborer also does the weeding for the farmer, occasionally for free. However, some farmers who do not practice the sagod

TABLE 4.15

PAYMENTS IN KIND FOR LABOR IN AGRICULTURAL PRODUCTION
DURING THE DRY SEASON

Farm Operation	Mean	Std. Dev.	% of Respondents Who Pay in Kind
Land Preparation	0	0	0
Irrigation	0.311*	1.093*	10.0
Planting	0.001**	0.01**	2.0
Weeding	0	0	0
Fertilizing	0	0	0
Harvesting	0.07**	0.08**	66.0
Other	0.012**	0.10**	2.0

* in cavans of rice.

** figures represent a percentage of the harvest.

system practice **hunusan** instead. In this system, harvesting is not necessarily done by those who weed, or vise versa. Contracts for harvesting and weeding are dealt with separately, thus the diversity in labour costs for these two farm operations.

Tables 4.11, 4.12, 4.14 and 4.15 show that weeding is paid for by the majority (64-67%) in cash, harvesting is paid with a percentage of the harvest. During the wet season, the harvester's average share of the yield is 15 percent, in the dry season, the share is 7 percent. The difference in percentage does not necessarily mean a difference in the amount received by the harvester. The dry season yield is usually much higher than that of the wet season's, and 7 percent of a dry season yield may be equivalent to 15 percent of the wet season yield. The harvester may get the same amount of yield in both seasons. A frequency count of the answers given by the respondents show, however, that the common rate for harvesters throughout the year is 10 percent of the harvest.

Tables 4.10 - 4.15 indicate that weeding is one of the lower paid farming operations. Conversely, it also requires the most number of workers and days of work. The value of weeding to landless workers in the areas studied lies more on the fairly steady employment it provides and occasionally, a guarantee in the share of the harvest, more than it does on how much it pays.

Fertilizing is regarded by most respondents as a family affair. Eighty-seven percent of the respondents during the wet season and 76 percent during the dry season reported hiring labour. However, a number of respondents replied that they use family labour. Fertilizing is one area of farm work which heavily involves the cooperative. Loans for production purposes in this case often mean loans in kind. Although the farmer spends little on fertilizing as far as labour is concerned, loans from the cooperative often take the form of urea, nitrogen-based, or "complete" fertilizer. Payment for these loans are often in kind too, in the form of cavans of rice to be marketed by the cooperative.

"Other" farm operations cover tasks such as watching out for birds that eat the grain, spraying pesticides with a hand pump, or rebuilding the bunds. These activities were not practiced by the respondents every season, or on a regular basis, nor at all, in some cases. The question was asked to determine other possible expenses of farmers in growing rice.

4.2.6 Sources of Capital

Determining the expenses of farmers in growing a crop is only one aspect of understanding their economic situation. Perhaps just as important is finding the source of capital for production. In an informal interview with the cooperative's administrators, questions regarding sources of loans were asked. The most common sources of loans mentioned were relatives, merchants, rural banks, the cooperative and landlords.

The cooperative manager explained that loans from other sources such as rural banks must be cleared before the member's application for a loan from the cooperative is considered or approved. This is done to ensure that the member "starts with a clean slate", or at least does not seem likely to default on payments. To some degree then, sleuthing on the financial status of the loan applicant is part of the cooperative administrator's job. Of course, there is no guarantee that a cooperative member will not ask for a loan from another source once the money from the cooperative is forthcoming. However, this loan has to be completely paid before loans from the cooperative for the next planting season can be applied for. Table 4.16 shows a brief summary of the respondents' source of capital.

TABLE 4.16

SOURCES OF CAPITAL FOR PRODUCTION

Source of Capital	% of Respondents	Average Amount of Loan in Pesos (Mean)	Std. Dev.
Self-financed	40.0	0	0
Rural Bank	6.0	42.00	420.00
Cooperative	79.0	8170.00	7158.40
Merchant	3.0	121.30	1213.00
Relatives	6.0	151.00	754.31
Landowners	2.0	180.00	1800.00
Other Sources	1.0	6.50	65.00

From Table 4.16, it can be seen that the greater majority (79%) of the respondents availed of loans from the cooperative. The average amount is P8170 (pesos). In an interview with Land Bank officials, it was found that the bank sets aside loans of up to P8000 per hectare for every farmer who is a cooperative member. Subsequent conversations with the cooperative's manager revealed that the amount per hectare is anything from P6000 to P8000. The amount earmarked for production loans have only been increased in 1991, prior to this study. In part it has been in response to farmers' complaints that the P6000 per hectare loan is insufficient.

Forty percent of the respondents replied that their production expenditures are largely self-financed, but this may not be completely accurate. For some farmers, "self-financed" may mean having availed of loans, but being able to pay it back. Only 6 percent of the respondents have current loans from rural banks. These may have been availed of after loans from the cooperative were approved, since cooperative members cannot get loans from DCCDI if they have unpaid loans from rural banks. This small percentage of borrowers from the rural banks may also reflect the relative unpopularity of institutional credit among Filipino farmers. Difficulty in application and in honoring debts may be factors in explaining why rural banks are not a common source of production loans.

Six percent of the respondents said that relatives are their source of production expenditure. According to the cooperative manager, this may only be partly true. Members may need more than the money allocated per hectare by the cooperative. However, she did say that since loans for production are largely given in kind, according to the needs of the member, members who borrow from relatives may be using the loans for personal expenses. The extent to which members allocate their cash

loans for production is difficult to determine. The cooperative's policy of giving the loan in kind ensures that production is not disregarded in favor of personal expenditures. However, monitoring how a cash loan is spent can only go so far.

One of the most interesting observations about the respondents' borrowing patterns lies in the two percent who obtain loans from landlords, and the three percent who borrow from merchants. These percentages indicate that the cooperative has been largely successful in "weaning" farmers from their need of the landlord and merchant as the traditional sources of social services and financial aid.

4.3 Test of Hypotheses

Statistical analysis enables the researcher to determine the validity of the hypothesis. The two statistical methods used in this study are chi-square and regression analysis.

Chi-square analysis shows whether there is a relationship between the dependent and independent variables. It is limited by its inability to determine the type and strength of the relationship between these variables. For this reason, multiple regression is used in these variables to provide a more comprehensive analysis of the data.

4.3.1 Chi-Square Test of Independence

In log-linear analysis, the value of the likelihood ratio chi-statistic decreases when other variables are included in the model. However, this makes the model more realistic, since it allows for other explanations to be considered. Tables 4.17 and 4.18 present chi-square values on selected independent and dependent variables chosen for their relationship to the hypotheses. Table 4.17 sets the dependent variable against the independent variables as a whole. Table 4.18 presents two by two column tables of the relationship between dependent and independent variables.

TABLE 4.17

RELATIONSHIP BETWEEN THE DEPENDENT VARIABLES AND SELECTED INDEPENDENT VARIABLES (LARGER TABLES)

Item	Farming Financed by Cooperative		Role in the Cooperative	
	Chi Sq.	Sig.	Chi Sq.	Sig.
Sex	0.2634	0.6078	1.6553	.6841
Age	40.5156	0.4919	38.3963	0.5868
Tenure	18.2470	0.0026*	7.8189	0.1665
Education	1.2840	0.8641	1.3122	0.8593
Coop Assistance	0.8410	0.3591	0.6572	0.4175

* Significant at 0.01.

TABLE 4.18

RELATIONSHIP BETWEEN THE DEPENDENT VARIABLES AND SELECTED INDEPENDENT VARIABLES (2 BY 2 TABLES)

	Farming financed by Cooperative		No Personal Contribution to the Cooperative	
	Chi Sq.	Sig.	Chi Sq.	Sig.
Role in Cooperative	9.362	0.0092*	4.2164	0.1215
Cash Contribution to Cooperative	25.505	0.3248	33.2750	0.0764
Tenure	18.2747	0.0026*	11.1930	0.0477**
Education	1.2840	0.8640	3.0661	0.5468
Coop Assistance	0.8410	0.3591	5.6690	0.0175*

* Significant at 0.01.

** Significant at 0.05.

4.3.2 First Hypothesis

The first hypothesis states that the cooperative which does not require land ownership is likely to attract more farmers to join. As of 1991, 423 new members swelled the membership list of DCCDI to 2,086 (DCCDI Annual Report, 1992:22), showing the accessibility of the cooperative. Whether these figures support the first hypothesis was examined earlier in a frequency count of tenure types of the respondents. Although owner-operators of their farms constituted only eight percent of the respondents, 73 percent were leaseholders, and thus had access to land for cultivation, and perhaps in the future, for ownership. Therefore, even if land ownership per se is not considered a requirement for membership, it was theorized that tenure may still be a consideration in obtaining production loans. In Table 4.17, tenure was found to be significant at 0.0l, in obtaining financial support from the cooperative. Similar results were obtained from the 2 by 2 table (Table 4.18).

The relationship between tenure type and the ability to get production loans could be a definite improvement over the hypothesized correlation between land ownership and cooperative membership. Several authors including Ledesma (1982) and Smith and Gascon (1979) have written on this. Yet, the significance of tenure in availing of credit services speaks of the need for more effort in promoting equity within the cooperative.

4.3.3 Second Hypothesis

The second hypothesis states that the cooperative that emphasizes meeting payments for loans rather than operating on government handouts is more likely to last. The DCCDI has existed for nearly twenty years, and is growing in membership as well as resources. It is partly affiliated with the government, as the greater proportion of its funds come from the government-run Land Bank of the Philippines. However, the DCCDI does not receive handouts from the government, it receives loans. Mr. C.B. Roxas, the assistant vice-president of the Land Bank's Field Services Division, has suggested this cooperative as an interesting subject for a case study partly because of its promptness in paying the loans extended to it.

To test the second hypothesis, 'cash contributed' by the members to the cooperative was chosen as an independent variable to the dependent variables of 'farming financed by the cooperative' and 'no personal contribution to the cooperative'. In both cases, the dependent variables were found to have no significant relationship to the independent variable. This does not necessarily mean that the hypothesis is not acceptable. The lack of significance of the cash contribution may not matter, although the act of payment might still do.

The second dependent variable's inclusion in the chi-square analysis of this hypothesis is meant as a check. "No personal contribution to the cooperative" is not significantly related to cash contributions to the cooperative. The lack of a significant relationship may be taken at face value, in that there are two distinct groups of respondents: those who pay their loans and those who do not pay their loans. The researcher is more inclined to explain the lack of a significant relationship by the reticence of some members to consider their payment of a loan as a personal contribution at all. In a later section on the specific personal contributions of the respondent to the cooperative, some will mention paying the loans as a personal contribution, others will regard paying the loans as an imper-

sonal gesture, as a fulfillment of a business contract. The cooperative's policy of not approving new loans before past ones are paid gives credence to the second hypothesis. The terms of payment between the DCCDI and the Land Bank are described in the Appendixes.

4.3.4 Third Hypothesis

The third hypothesis of this study states that the cooperative that encourages both financial responsibility in obtaining loans and sharing administrative duties among its members is more sustainable. The sustainability of DCCDI is regarded as a given, based on its twenty-year record of local, non-governmental management. The dependent variable is 'farming financed by the cooperative', because it is the main gauge of the cooperative functioning according to its aims. The independent variables include sex, age, tenure, education, cooperative assistance, role in the cooperative and cash contribution to the cooperative. The two latter variables are considered to contribute most to the hypothesis. The other variables were included to find if these factors in any way affect the hypothesis. Each independent variable will be discussed separately.

Sex

The inclusion of sex as an independent variable comes in a roundabout way, as does age, tenure and education. Whether these factors were reasons for either acceptance or non-acceptance of loan applications was thought to be relevant by the researcher, as these are factors that define the respondents, and cannot be manipulated easily or at all.

Of the above-mentioned variables, sex is probably the most definite. Various studies of late have theorized that access to production loans, education and extension opportunities and leadership positions are gender-related (Manyeh, 1990). For this reason, the researcher thought it necessary to include the respondent's gender in the analysis. In Table 4.17, showing the larger tables of the chi-square analysis, sex is included, although it is not a significant factor.

The Dayap cooperative has more male members than female members, and the male respondents of this study outnumber their female counterparts by 24 percent. Yet during observation of the cooperative's election of officials, women were found to be well-represented in both the voting population and the list of candidates. The insignificance of gender as a factor in obtaining production loans from the cooperative in the chi-square analysis is regarded by the researcher as reflective of actual conditions. Observation of daily routines in the cooperative offices and warehouses, as well as conversations with its members, show a refreshing lack of any gender bias in DCCDI.

Age

Age was included in the chi-square analysis to find if seniority, or conversely, youth, was a vital factor in the approval of loans. Although none of the respondents was a minor, or below 21 years old, age is not a significant factor either in the application for, or approval of a production loan. What age may reflect as a variable is the age of most people involved in farming in the villages served by the cooperative. The mean age of the respondents is 46.42, the Chi-square value is 40.52. This could show that fewer younger people are involved in farming, or imply that the household head status is usually held by people in their forties. It also supports the cooperative management's assertion that age is not a condition in providing production loans to applicants.

Tenure

As discussed earlier in the section on the first hypothesis, tenure security or land ownership is not necessary for cooperative membership. However, it does seem to be a significant factor, (at 0.01 level of significance) in obtaining production loans from the cooperative. The issue of tenure status is so pervasive of every aspect of Philippine agriculture that its significance in this survey, with this group of respondents, is almost to be expected. Recognizing tenure's importance, the cooperative has issued directives to alleviate the financial difficulties of very small farmers. Among these, Directive No. 27, 1991, states

> A farmer who cultivates one or less than one hectare will deposit one cavan (50 kilos) every harvest and one cavan deposit for every hectare farmed above one hectare (DCCDI Balita, Dec. 1991:5).

The above-mentioned directive allows any cultivator with access to, rather than ownership of land to avail of production loans. It also permits the cooperative to keep some form of security against defaulting on payments by the landless farmers. In this sense, the Dayap cooperative could still be regarded as more progressive than other Philippine cooperatives, such as the government-run Samahang Nayon. Still, the significance of tenure in availing of production loans cannot be disregarded.

Education

Education was included in the chi-square analysis of possible factors affecting the feasibility of having the cooperative finance farming for two reasons. First, it might be possible that only more highly educated farmers would think of applying for a loan from an institutionalized source such as a

cooperative. Secondly, the DCCDI itself may discriminate on the basis of the applicant's educational attainment, against providing the loan. The results of the chi-square analysis shows, however, that neither seems to be the case. Education is not significant in having a farm enterprise financed by the cooperative.

Cooperative Assistance to Non-Farmers

Since not all members of the cooperative are farmers, this variable was included in the chi-square analysis to determine whether non-farmers share in the financial and administrative responsibilities within the cooperative. As can be expected, there was no significant relationship between cooperative assistance to non-farmers and farmers financed by the cooperative. Interestingly enough, the relationship between cooperative assistance to non-farmers and having 'no personal contribution to the cooperative' was significant at the 0.01 level in the 2 by 2 tables. This may mean that non-farmers do not believe that they have any personal contribution to the cooperative, since they do not leave part of a harvest as a deposit as farmer-members do. On the other hand, this could also mean that non-farmers who receive financial assistance from the cooperative hold the opinion, like some farmer-members, that 'merely' paying their loans is not a personal contribution.

Role in the Cooperative

The respondents' role in the cooperative, whether as a member, as an employee, as an elected official or any combination of the three, was considered an important factor by the researcher since these roles may affect how accessible the cooperative is to the individual. It may also affect the sense of responsibility and participation the member has towards the cooperative.

The role of the individual in the cooperative was found to be significant at the 0.01 level. A look at the percentages of officials and employees among the respondents shows that there are 10 percent of the former and 7 percent of the latter within the sample. However, since all officials and employees are bona fide members of the cooperative, and since every member has an equal chance of being elected an official, these numbers may mean more than what their sizes imply. For this reason, the researcher has pursued the subject of roles within the cooperative further in interviews with the elected officials and management of DCCDI, which will be discussed in a later section.

Cash Contribution to the Cooperative

As it is in the discussion of the second hypothesis, the cash contributed by the individual to the cooperative did not affect the approval of production loan applications. There is no significant rela-

tionship between the two variables. However, as in the second hypothesis, this lack of significance does not necessarily mean that the two are completely unrelated. The amount of cash contributed to the cooperative may not be significant in having the farming operation financed by the cooperative, but contributing something, whether in cash or in kind, may. Payments which some members consider as cash contributions are of course, commensurate with the size of the loans.

4.3.5 Fourth Hypothesis

The fourth hypothesis deals with the issue of leadership. It states that the cooperative that allows access to leadership positions regardless of age, gender, land-owning status or connections to traditional sources of power is likely to have credibility among its members.

DCCDI's credibility could be observed from two vantage points, from within and from without. For purposes of discussing the fourth hypothesis, the outside view will be introduced first, DCCDI's credibility among its funding agencies. The credibility of the cooperative within, among its members, will be discussed in the following chapter. The order of discussion does not in any way reflect the importance of who ascribes credibility to the cooperative. It is merely presented in this manner to avoid redundancy.

Dayap Credit Cooperative and Development, Inc., was established in February 14, 1972, with the help of the Philippine Rural Reconstruction Movement (PRRM). The DCCDI, then called the Dayap Credit Union, had 53 original members and 2,683.00 pesos in seed money collected from among its members.

In 1992, the DCCDI has more than two thousand members, and 15,601,395.00 pesos in assets. These assets include loans from lending institutions and grants in cash and kind from various agencies. The lending institutions include the Land Bank of the Philippines (LBP), the National Food Authority (NFA), and the government's Rice Action Program (RAP). The grants come from such sources as Canadian Saints Outreach (CSO), the Canadian Embassy's Mission Administered Fund, the Canadian International Development Association (CIDA). The grants are not always given in cash. The cooperative's office computer and the sewing machines in the small garments business are grants in kind.

Whether DCCDI's good credit rating or its reputation as a dependable cooperative among its supporters is warranted, is of course open to question. However, it does exist. It is on this basis that

the factors that could affect its leadership, and indirectly, its credibility, will be discussed. The independent variables for the chi-square analysis are sex, age, tenure, education and cooperative assistance to non-farmers. The dependent variable is the role in the cooperative.

Sex

Gender differences are not a significant factor in assuming roles within the cooperative. The chi-square analysis shows this, and so does actual observation of the cooperative's daily activities. DCCDI's manager is a woman. As of 1991, two out of four elected officials were women. Although men outnumber women as members and loan applicants in the cooperative, gender does not affect access to leadership positions. The predominance of men in the membership list may be due to their status as household head.

Age

The respondents' age was assumed to affect their roles within the cooperative because it was thought that seniority might count. However, the chi-square analysis shows that this is not the case. There is no significant relationship between age and role in the cooperative either at 0.01 or 0.05 level. In ... additional occupation such as farming, which is the main source of income among the cooperative members, it is interesting to find that mere seniority in age is not a requirement for leadership. The results of the chi-square analysis on age may be a reflection of the location of the Dayap cooperative. Being situated close to the University of the Philippines at Los Banos, where agriculture is the predominant area of research, Dayap's inhabitants may be more open to ideas from younger members of the cooperative. A number of DCCDI's officials and management have been connected with the university as students or researchers at some point in their lives. Thus, education may in some way compensate for the experience that greater chronological age implies.

Tenure

Tenure was not expected to matter in the role within the cooperative as much as it was thought to in 'farming financed by the cooperative'. The reason for this is that once an individual has successfully taken a loan from the DCDDI, and automatically becomes a member, leadership roles could be just as attainable. The results of the chi-square analysis in the larger tables shows this to be partly true. Tenure is not a significant factor in the respondents' role within the cooperative. To check this result, however, tenure was used as an independent variable to the dependent variable of 'no personal contribution to the cooperative' in the 2 by 2 tables. This was done to find if respondents who consid-

ered themselves as having no personal contribution to the cooperative were affected at all by their tenurial status. It was theorized that a member who might be having difficulties due to the insecurity of his tenure status would be unable to contribute much to the cooperative as a member, much less as an official. Tenure is significant at the 0.05 level.

The subject of tenure will again be discussed in the section on regression analysis.

Education

The respondents' educational attainment was thought to affect their role in the cooperative in the manner that age does. Filipinos hold a high regard for education, thus it was theorized that the more educationally advanced a person is, the greater the chances are of this person to achieve positions of responsibility within an organization. In a sense, the importance given to education compensates for the absence of a significant relationship between age and role in the cooperative.

Despite the weight assigned to learning and its institutionalized manifestation, educational degrees, education did not prove to be a significant factor in an individual's role within the cooperative. This was observed both in the larger tables and in the 2 by 2 tables of chi-square analysis. Perhaps more importantly, this was also observed by the researcher in interviewing certain members of the cooperative. While the manager of DCCDI has an advanced degree from the University of the Philippines at Los Banos, an interview with the former head of the cooperative's board of directors revealed that he had finished, "just (his) grade school (education)". Clearly, factors other than education affects the respondents' role in the cooperative.

Cooperative Assistance to Non-Farmers

DCCDI is a multipurpose cooperative, and thus provides different services to its members. Members who are not involved in farming were assumed to have a significant role within the cooperative, since a number of them were observed to work in an administrative capacity within the office. Also, the inclusion of members who are not in agriculture in leadership positions was thought to affect the expansion of non-agricultural services the cooperative offers. However, this was not found to be the case. There was no significant relationship found between cooperative assistance to non-farmers and role in the cooperative.

As far as the individual's role in the cooperative is concerned, the most significant factor examined up to this point seems to be tenure. Other variables in the chi-square analysis did not qualify as significant.

4.4 Regression Analysis

Logistic regression can be used to predict a binary dependent variable from a set of independent variables. For this reason, it was chosen as the statistical tool to find the strength and nature of the relationship between selected independent variables and two dependent variables.

Table 4.19 presents the regression results of role in the cooperative with the independent variables of age, tenure, education and cooperative assistance to non-farmers. Likewise, Table 4.20 presents the results of regression of farming financed by the cooperative with several selected independent variables.

TABLE 4.19

REGRESSION RESULTS OF ROLE IN THE COOPERATIVE ON SELECTED INDEPENDENT VARIABLES

Variables	Slope (B)	Beta	Sig. T	R^2
Age	0.1037	0.0000	0.7475	0.0000
Tenure	-0.6397	0.5274	0.0089*	-0.2392
Education	1.2607	0.0000	0.2615	0.0000
Coop Assistance	0.2630	0.0000	0.6081	0.0000

* Significant at 0.01

In Table 4.19, there were positive and negative slope values, but all except tenure were zero, and therefore not included in the situation. It reinforces the results of the chi-square analysis, in that age, education and cooperative assistance to non-farmers had no effect on the respondents role in the cooperative. The lack of significance of these factors could show that DCCDI allows all its members to affect its policies and run its operations. Tenure, on the other hand, has a negative but significant relationship with role in the cooperative. The regression shows that as tenure security increases, from landless laborer to owner-operator, role within the cooperative decreases. The relationship between tenure and role in the cooperative is significant at the 0.01 level, but at a low R^2 level of 0.06, it is nevertheless a real relationship. Only 6 percent of the respondent's role in the cooperative may be explained by tenure, leaving 94 percent unexplained. Tenure's effect may be due to the time available

for deeper involvement with cooperative business of those with lower tenurial status. An alternative explanation given is that people who own their own land do not need to get involved with the cooperative.

TABLE 4.20

REGRESSION RESULTS OF FARMING FINANCED BY COOPERATIVE ON SELECTED INDEPENDENT VARIABLES

Variables	Slope (B)	Beta	Sig. T	R^2
Age	0.5743		0.4485	
Tenure	0.5501	1.7334	0.0162	0.1918
Education	0.1705		0.6797	
Coop Assistance	1.5180		0.2179	
Role in Cooperative	-1.4899	0.2254	0.0122*	-0.2041

* Significant at 0.01

Table 4.20 presents the regression analysis done between farming financed by the cooperative and the independent variables of age, tenure, education, cooperative assistance to non-farmers, and role in the cooperative. Of the five independent variables, two had significant relationships with the dependent variable. Tenure, with a positive beta slope, was significant at the 0.01 level. This means that an increase in tenure security corresponds to an increase in the possibilities of having farming financed by the cooperative. The R^2 of tenure however, is not very high. It only explains four percent of what affects the cooperative to finance the farming operation. Another four percent may be explained by the role in the cooperative. Unlike tenure, role in the cooperative has a negative slope, implying that less possibility of holding roles of responsibility within the cooperative corresponds to an increase in the chances of having farming financed by the cooperative. Role in the cooperative is significant at 0.01 level. Combined with tenure, it still leaves 92 percent of the variance in farming financed by the cooperative unexplained.

The results of the regression analysis done on the dependent variables have led to results which have been thought possible, but were not completely expected. First, it is surprising that statistically, a decrease in tenure stability actually increases the chances of holding a leadership role within the cooperative. This result more than strengthens the acceptance of the fourth hypothesis, it goes a little further. Tenure does affect the respondents' role in the cooperative, but not in the way it was expected to.

Secondly, although tenure was observed to affect farming being financed by the cooperative as expected, the member's role in the cooperative did not significantly affect the obtainment of a loan. It was interesting that an increase in role within the cooperative, and by implication, influence, lessens the possibility of farming financed by the cooperative. The cooperative's leaders have the benefits of directing the operations and funds of the organization. Whether the results show that there is less time for farming once roles of responsibility are taken, or that there is a stringent check against "influence-peddling" within the cooperative, is still open to question. Another suggested explanation is that those who have their farming financed by the cooperative may not necessarily have the skills involved in handling roles of responsibility within the cooperative.

4.5 Services Received by the Cooperative Members

In the preceding sections, the respondents' socioeconomic characteristics and the factors that affect the cooperative were analyzed and discussed. In this and the following sections, the respondents' views about the cooperative are given emphasis. Table 4.21 and Table 4.22 were based on questions asked after consultation with the cooperative's management. Table 4.22 presents percentages based on frequency counts of answers to open-ended questions. These answers were categorized using certain key statements as guides. The key statements were based on a review of all the answers, and these statements were observed to recur frequently in the answers. The majority of respondents included several of these key statements in their answers.

TABLE 4.21

SERVICES RECEIVED BY COOPERATIVE MEMBERS

Item	Percentage
Cash Loans	91.0
Extension Services	91.0
Fertilizer Supply	88.0
Pesticide Supply	81.0
Marketing Assistance	59.0
Consultation Services	54.0
Herbicide Supply	54.0
Portion of Harvest	13.0
Use of Cooperative-owned Draft Animal	12.0
Use of Machinery	6.0
Use of Cooperative-owned Land	5.0

4.5.1 Cash Loans and Agricultural Supplies

Table 4.21 shows the services that the respondents say they receive from the cooperative. Ninety-one percent consider the availability of cash loans as the most vital service the cooperative offers. Most respondents who answered 'cash loans' also mentioned other services, but for many, this was their main reason for joining the cooperative. The supply of herbicide, pesticide, fertilizer and other loans in kind could also be considered as 'material' services to the cooperative's members. According to the manager, since loans are given in kind as much as possible to avoid their being used for non-production purposes, supplies could also be considered as part of the main reason why farmers join the cooperative. For the majority of respondents, the most tangible services are the most important.

4.5.2 Extension Services

Although not as quantifiable as the above-mentioned services, 91 percent of the respondents replied that they receive extension services from the cooperative. When asked about the kind of extension they receive, 74 percent answered training, and 61 percent mentioned visits (Table 4.22). At this point, some clarification should be made about the training and visits received by the respondents. Before they are allowed to join the cooperative and thus avail of production loans, applicants are required to undergo a series of lectures, wherein terms of credit, cash management and financial responsibilities are discussed. In visits, cooperative officials and employees are often in the position to assess the damage brought about by natural disasters necessary in following up crop insurance claims. Visits to homes and farms made to find if the declared number of hectares cultivated, or facilities for, for instance, hog raising, are sufficient.

Very rarely does the DCCDI give training sessions in farming, or go to the field to encourage a certain agricultural practice. This is not necessarily due to not wanting to improve the cooperative's extension services. It may be a result of the lack of personnel. The expansion of the cooperative's education committee includes the publication of the first issue of a trimonthly newsletter for members. This newsletter, called the DCCDI Balita (DCCDI News) is considered a step towards broadening DCCDI's extension services. It contains updates on cooperative projects and accounts, and news on services available to members.

4.5.3 Marketing

A service that 59 percent of the respondents mentioned, but do not take full advantage of, is the marketing assistance offered by the cooperative. A few of the respondents who answered that they market their produce through the cooperative claim that they do not market all their produce through DCCDI. Although they appreciate the time and effort saved by having the cooperative pick up the produce from their farm, store it, and sell it, they say that better prices may be available from other sources. Thus, a certain maximum is set aside for the cooperative to sell, and the rest is sold by the farmer or through a merchant. Marketing rice is a very risky proposition for most farmers in the Philippines. The proper balance between getting a good price and security in finding a ready buyer is a constant concern. For the cooperative's members, the worry of finding a buyer is alleviated, but as will be further discussed later, this is not enough for some respondents.

Other services mentioned by the respondents, like receiving a portion of the yield (13%), land use (5%), the use of cooperative-owned machinery (6%) and draft animals (12%) were not mentioned by the cooperative's officials as included in the services they provide. However, it was suggested that members of the cooperative may be inclined to offer these services to their fellow members, for the simple reason that they belong to the same cooperative. The 'unofficial' benefits of joining the cooperative sometimes manifest themselves through personal dealings among the members.

TABLE 4.22

KINDS OF EXTENSION SERVICES RECEIVED BY COOPERATIVE MEMBERS

Item	Percentage
Training	74.0
Visits	61.0
Others	10.0

4.6 Answers to Open-Ended Questions

The difficulty of formulating survey questions that will adequately reflect the respondents' views about the cooperative made open-ended questions necessary. Surprisingly, many of the answers given were similar, reflecting common concerns and opinions about the cooperative. The majority of respondents had more than one key statement in their answers. Results are presented in Tables 4.23 to 4.26.

4.6.1 Cooperative's Service to Respondent

When asked about the cooperative's service to the respondent concerned (Table 4.23), instead of the services available to all cooperative members (Table 4.21), financial assistance was still the most frequent answer at 60 percent. The next most frequent answer, given by 31 percent of the respondents, is that the cooperative is a dependable source of production loans. Other answers,

though less frequent, like the 13 percent who mentioned that the cooperative opens possibilities for cash-earning projects, and the five percent who replied that they get help in saving money, are all forms of financial assistance.

The results are not unexpected, since although DCCDI is a multipurpose cooperative, its main function appears to be providing credit. However, the cooperative does provide more than just financial services. Although three percent answered that marketing assistance was received, and two percent had technical assistance in farming, most respondents seem not to take advantage of these services. Whether this is a result of the cooperative's lack of emphasis on the availability of these services, or the respondents' personal decision not to take advantage of them, is not known. Either way, it could be considered a waste of resources.

To find if it was the lack of information that made very few respondents mention the non-financial services, the respondents were asked what additional services they would like to receive from DCCDI. Their answers will be presented in a later section.

TABLE 4.23

COOPERATIVE SERVICE TO THE RESPONDENT

Item	Percentage
Dependable source of production loans	31.0
Opens possibilities for cash-earning projects	13.0
Help in need, financial assistance	60.0
Marketing assistance	3.0
Helps in saving money	5.0
Cooperation in projects	2.0
Technical assistance in farming	8.0
Enables one to buy household needs	2.0
No answer	4.0

4.6.2 Personal Contribution to the Cooperative

Just as the major benefit from cooperative membership seems to be financial, so is the respondents' personal contribution to the cooperative. Table 4.24 summarizes the respondents' answers when asked what they considered to be their personal contribution to the cooperative. Thirty-two percent of the respondents replied that they help increase the cooperative's capital, and an additional 12 percent say that they pay loans on time. Other answers are more social in nature: 28 percent say that they attend meetings and give suggestions, seven percent say they have served as, or are serving as officials, and three percent say that they train and advise other members. These answers to the question of personal contribution to the cooperative reflects the dual character of a cooperative. It is both a business enterprise and a social organization. The differences in emphasis, and the difficulties in fulfilling both functions are felt by the members as cooperative management does when dealing with third parties.

Twenty-five percent had no answer to this question. Two percent were honest enough to say that they do not help because they cannot spare the time and effort involved. Although this answer seems straightforward enough, it also points to the fact that some respondents do not consider their financial support to the cooperative as a personal contribution. Recognition of the social aspects of cooperative membership is apparent in these answers, even as these respondents cannot give their 'personal contribution'.

TABLE 4.24

PERSONAL CONTRIBUTION TO THE COOPERATIVE

Item	Percentage
Increases the cooperative's capital	32.0
Serves as an official	7.0
Attends meetings and gives suggestions	28.0
Pays loans on time	12.0
Trains and advices other members	3.0
Does not help because of time and effort involved	2.0
No answer	25.0

4.6.3 Additional Services Wanted from the Cooperative

The respondents were asked what additional services were desired from the cooperative. Their answers are summarized in Table 4.25. Although four of the most frequent responses referred to financial services, other answers showed an awareness of the cooperative's needs.

Twenty-six percent of the respondents wanted the maximum loan limit to be increased, while 22 percent requested the faster processing of loans and crop insurance claims. Another 16 percent wanted the faster approval of loans. One respondent would like the cooperative to pay better prices for the produce marketed through it. These answers could be divided between those who would like faster financial services, and those who want larger amounts of cash from the cooperative. It is interesting that someone mentioned the need for higher prices for produce. Marketing assistance is provided by the cooperative, but it may not be taken advantage of by others because they could get better prices for their produce outside the cooperative.

In connection with this, 6 percent of the respondents replied that they would like training and help in marketing. Training in marketing could be a requested service because the respondents would

rather sell their produce at better prices themselves, at the same time that they recognize the cooperative's expertise in doing it for them. Learning how the cooperative markets the produce, and the advantage of knowing where to sell at higher prices gives them the benefits of both.

Other answers to additional services wanted from the cooperative were interesting in that they were more a "wish list" for the cooperative rather than a request for more benefits from it. The respondents would like to see project expansion within the cooperative (12%), better administration (4%), more orderly programs (3%), have members pay on time (22%) and six percent wanted the cooperative's loans from the Land Bank to be completely paid. These set of responses are not selfless perhaps, but they reflect the respondents' identification with the cooperative. More importantly, these responses could be an indication of the respondents' awareness, and analysis of, what their cooperative needs to be successful in fulfilling its objectives.

Five percent of the respondents would like to see more training in new technology within the cooperative. These respondents would like DCCDI's extension functions to go beyond its current confines within financial management. The requested training programs include those on new farming methods, animal husbandry, sewing, or opening a small general store. The DCCDI already has projects on the training programs suggested. The respondents would like to be more skilled in running these projects, and perhaps in the future have independent business ventures of their own. A conversation with DCCDI's manager revealed that it is not an unwelcome idea to have members establish their own livelihood projects. The main hindrance to having more training programs is the limited number of personnel.

Thirteen percent of the respondents wanted better service from the cooperative employees, 4 percent wanted better administration, and 3 percent would like more orderly programs. These answers reveal a dissatisfaction in the way the cooperative is managed, although to what degree this dissatisfaction runs is unknown. Specifications on what "better" means veers towards the management of loan requests and crop insurance claims. Respondents would like faster service from employees. Although these criticisms are perhaps the easiest to remedy by the cooperative personnel, changing the situation is not completely within their power. For example, crop insurance claims are processed by cooperative employees, but the actual disbursement of funds are controlled by a government office. Improvements in this area are possible and necessary, but are not easily brought about.

TABLE 4.25

ADDITIONAL SERVICES WANTED FROM THE COOPERATIVE

Item	Percentage
Faster processing of loans and crop insurance	22.0
Faster approval of loans	16.0
Training and help in marketing	6.0
Training in new technology	5.0
Increase the maximum loan limit	26.0
Better service from employees	13.0
Better administration	4.0
More orderly programs	3.0
Payment to the Land Bank completed	1.0
Better prices for produce	1.0
Members to pay on time	22.0
Nothing else, no answer_____	31.0

4.6.4 Further Improvements Wanted for the Cooperative

Since the cooperative's success or failure affects its members considerably, the respondents were asked what further improvements they wanted for the cooperative. Table 4.26 presents the respondents' answers. Knowledge of the cooperative effort is evident in the answers with the highest frequencies. Twenty-two percent replied that members should pay on time, which indicates that these respondents are conscious of every member's contribution to the common fund. Likewise, 16 percent suggested that the officials and management take more care in approving loans, even if they want faster service as well. Six percent would like to see the cooperative expand, and pay the loans

from the Land Bank. This answer, which shows both ambition for the cooperative as it does a desire to be financially independent of outside institutions, shows a clear identification with the cooperative's aims.

Respondents who answered that they would like more cooperation among members include both those who would like to see more personal interaction among the members, and those who would like members to fulfill their responsibilities, however distant they may be in their personal relations. A common complaint among the respondents who gave this answer is that some members' involvement with the cooperative ends with what they can get out of it. More committed members feel that they have to make up for the limitations of other members. Interestingly enough, there were more respondents who would like to see more cooperation among the members than those who would like to have better officials and leadership (4%). Emphasis on a charismatic leader instead of the responsibilities of individual members is often the cause of the short-livedness of Philippine cooperatives. The shift in emphasis from the importance of leadership to the importance of greater cooperation is perhaps one of the distinguishing characteristics of DCCDI.

Other answers to further improvements wanted for the cooperative are more concerned with the services the cooperative can perform better. These include having more orderly programs (3%), better prices for produce (1%), better results from crop insurance (2%), more loans available for farming (5%), more technical assistance to members (2%), and greater savings from loans (1%). Although only small percentages of the respondents gave answers pertaining to the cooperative's more effective operations, this may merely reflect a lack of definition about what the cooperative needs to improve. Twenty-four percent of the respondents did not give any answer to what further improvements they wanted from the cooperative, even if they did say they wanted further improvement.

TABLE 4.26

FURTHER IMPROVEMENTS WANTED FOR THE COOPERATIVE

Item	Percentage
Faster processing, more care in approving loans	16.0
More orderly programs	3.0
Expansion and payment to the Land Bank	6.0
Better prices for produce	1.0
Members to pay on time	22.0
Better results from crop insurance	2.0
Better officials and leadership	4.0
More cooperation among members	17.0
More loans available for farming	5.0
More technical assistance to farmers	2.0
Greater savings from loans	1.0
Nothing else, no answer_____	24.0

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The Dayap Credit Cooperative and Development, Inc. (DCCDI) was studied to have a clearer understanding of what constitutes a cooperative that contributes to rural development. The DCCDI, like most Philippine cooperatives, has been and is still partly subsidized by the government. Unlike other Philippine cooperatives, however, it seems to be more inclined towards financial independence, as shown by its prompt repayment of loans from the Land Bank of the Philippines. Also, its expansion in membership and operations during twenty years of existence illustrates its relative sustainability, since a great majority of other Philippine cooperatives have not been able to last for a decade (Rola, 1988).

The socioeconomic situation of a sample of the cooperative members was established by showing the results of a survey. Several hypotheses were presented and tested to determine why DCCDI has done reasonably well. The findings are summarized as follows.

5.1 Findings of the Study

5.1.1 Socioeconomic Profile of Respondents

1. DCCDI's members range from 21 to 90 years old, could be male or female, may have reached any educational level from grade school to a university degree, and could have other sources of income apart from farming. The sociological characteristics of the cooperative members are widely divergent. However, the average member is 46 years old, has finished grade school, earns his living by farming, and leases the land he tills.

2. Seventy-eight percent of the respondents grow rice. Other crops grown are coconut, pineapple, and lanzones. Several have livestock and poultry projects. The most common animals raised are ducks and pigs. The livestock component of the cooperative is considered important by the respondents because it provides an alternative for members who do not have access to land for growing crops. These livestock and poultry projects are mostly on a cottage-industry level, and requires not much more than backyard space.

The inclusion of farmers who grow produce other than rice is also significant despite their relatively small proportion among the respondents. Hayami and Quisumbing (1987: 6-7) discuss the policies of the government in excluding lands producing plantation crops from the land reform program. The government believes that scale economies do not allow the optimal yields from small parcels of

plantation crops. However, Hayami and Quisumbing's reconnaissance survey shows that scale economies do not exist in tree crops such as coconut, rubber, coffee or cacao. There was no significant difference in yield between small and big farms given similar inputs. Thus, the cooperative could be considered progressive in providing production loans to farmers growing tree crops on a small scale.

3. Eighty-six percent of the respondents have some access to land for farming. Seventy-three percent are leaseholders, five percent are share-tenants and eight percent are owner-operators. The average size of a landholding is 1.64 hectares.

The percentage of cooperative members who have access to land shows that despite the cooperative's efforts to provide services to all types of farmers, those who have some security of tenure still have an advantage. However, the minimal size of the respondents' landholdings attest to the cooperative's objectives of providing services to small farmers.

4. The majority of respondents hire extra labor for farming operations, the most costly of which is land preparation. Payment for most farm work is in cash, except for harvesting, which is paid for with approximately 7 to 10 percent of the harvest. The **sagod** system is widely practiced. In this arrangement, the landless laborer is given harvesting rights with the understanding that weeding would be done by the laborer, often free of charge.

Smith and Gascon (1979) discuss the extensive use of hired labour in Laguna, due mainly to the introduction of new rice technologies, e.g., high-input, high-yielding varieties. This increase in labour requirements has the result of increasing farming jobs within the area (Kikuchi et al, 1979) as it stresses the need for agricultural credit to pay for hired labour (Hayami and Quisumbing, 1987). The results of this study confirms the literature available on agriculture in the Laguna area, and stresses the importance of providing services such as credit to small farmers regardless of their tenurial status. The data on labour expenditure shows that in many cases, land is not the most important factor in promoting rural development. The need for a source of production loans, particularly for labour, is.

5. Capital for farming is mostly supplied by the cooperative. Only two percent reported going to the landlord, the traditional source of capital, for loans.

The Technical Board of Agricultural Credit reports that in the 1950s, informal sources of credit such as landlords and moneylenders supplied about 80 percent of credit to farmers. The increase in government-financing programs in the 1970s decreased credit from informal sources to about 30 percent, but in the late 1970s, this figure increased due to the reluctance of rural banks to lend agricul-

tural loans. TBAC also discovered that despite expansion in agricultural credit policy, there was a lack of agrarian reform beneficiaries, viable projects, and rural credit outlets. Inspite of often usurious interest rates in borrowing from informal sources, farmers were more concerned with the availability rather than the cost of loans (TBAC, 1980: 1-2).

The percentage of respondents who borrow from the cooperative rather than informal sources shows that in some respects, credit at reasonable interest rates, for production purposes, is now available to small farmers. A pervasive aspect of borrowing from informal sources is the patronage it entails. This dependency on the source of the loan is counterproductive to self-reliance, which is essential to rural development. The availability of credit from the cooperative increases self-reliance, as there is a common fund from which to borrow from, and towards which the cooperative member contributes.

5.1.2 Factors that Affect Access to Loans and Leadership Positions

1. Tenure is still an important aspect of cooperative membership. Although land ownership is not a requirement for membership, tenurial status is a significant factor in being able to get production loans. This finding suggests that the DCCDI's accessibility as a source of loans for agricultural production is still limited by the land factor. However, since the DCCDI is also a multipurpose cooperative, it does, to some extent, support members who do not have land by other income-generating projects (e.g., garments manufacturing) and other forms of aid (e.g., food loans).

2. Tenure also figures prominently in the respondent's role in the cooperative. However, results of the regression analysis showed that the relationship between the two variables was not as expected. A decrease in tenure stability corresponds with an increase in the possibility of a leadership role within the cooperative. It could be said that aside from tenure, DCCDI is quite democratic both in accessibility to loan applicants, and in choosing its leaders. The other variables that were considered in determining the respondent's role within the cooperative, such as age, gender, education, the amount of cash contributed to the cooperative, did not affect the respondent's role within the cooperative significantly.

3. Although tenure is a significant factor in applying for production loans, the DCCDI has issued a directive that a farmer who cultivates land that is not necessarily owned can deposit one cavan (50 kilos) of rice for every hectare planted, every harvest, in lieu of having land as a form of collateral.

5.1.3 Respondents' Views About the Cooperative

1. The majority of respondents joined the cooperative because it provides production loans. However, the cooperative means more than a source of credit to other members. For those without access to land, DCCDI has become a source of capital to be used in projects such as animal husbandry, or establishing a small general store. Additional services such as agricultural extension and training in livelihood skills were widely requested.

2. Common complaints against the cooperative include the slow processing of loans and crop insurance claims, the occasionally inadequate loan limit, and low prices for produce marketed through the cooperative. Some members offered suggestions on how to avoid encountering some of these problems. Training in marketing to enable the farmer to sell his produce at a more competitive price was one of the most common suggestions.

3. The majority of respondents believe that they have valid contributions to the cooperative. Paying loans promptly, thus increasing the cooperative's capital, is seen as a contributing factor to the cooperative's success. Attending meetings and giving suggestions for improvement is regarded as evidence of participation within the cooperative. For a small percentage of the respondents, serving as an official is their way of showing their involvement with DCCDI.

4. Among the most frequently mentioned areas of improvement for the DCCDI are greater efficiency from the employees in processing the loans, and prompt payment of loans and more cooperation among the members.

5.2 Recommendations

This study was done with the purpose of discovering the factors that enable a rural development program such as a multipurpose cooperative to sustain itself, to work for and with its members in accomplishing its objectives. In this sense, the DCCDI is considerably more successful than other cooperatives which have ceased operating due to the lack of government support or the apathy of its members. However, this does not imply that the DCCDI does not have its share of problems. Some of these problems are within the capabilities of its members to remedy. Others require greater coordination from the outside factors that affect the cooperative, such as government bureaucracy and markets. The researcher presents the following recommendations based on her observations and suggestions offered by some of the respondents.

5.2.1 Loan Processing and Crop Insurance

A number of respondents reported receiving prompt service, yet one of the most common complaints against the cooperative is the length of time it takes to have a loan application processed, or to claim crop insurance when it is due. Although speed in processing loan applications depends largely on the cooperative employees, approving the loans is largely the concern of management. Closer coordination between the loan clerk and the borrower is possible if the time allocated for processing the loans is agreed upon and followed by both parties. The absence of telephone services in the villages covered by the cooperative and in the cooperative office itself makes a commonly agreed upon processing period necessary, because members have to go to the cooperative office to follow up their loans. This means time away from the farm and other possible income-generating activities. On the part of the employees, a set period will reduce the difficulties of repeatedly explaining why the loan application is not processed yet.

Approving the loans can be done more quickly and accurately if management mobilizes its personnel such that an inspection of the hectarage or facilities for the project is investigated as soon as the loan application is received. This could be done either by increasing the number of cooperative employees who could do the inspection, or, by increasing the duties and compensation of the existing employees. Approval or rejection of the loan application can thus be decided on immediately. In this way, the applicant can either find other sources for the loan outside the cooperative, or apply for other types of loans the cooperative makes available to its members.

The problem of crop insurance claims is more difficult for the cooperative to remedy, because crop insurance is not completely within their mandate. The farmer who applies for membership to the cooperative must have crop insurance, which is released by the Philippine Crop Insurance Corporation (PCIC), a government office. However, claiming it when the need arises is done through the cooperative. Complaints about the tardiness of crop insurance claims is thus received by cooperative employees, even as the funds are held by the PCIC. While the delay is occurring, the farmer has to forego the necessary production and consumption expenses, or go into debt. The solution of this problem is largely the government's responsibility. It is recommended that the crop insurance office concern itself with a problem that is within its mandate to solve. Another alternative is for the crop insurance office to allow the DCCDI complete control of all crop insurance claims, including keeping the funds for this purpose.

5.2.2 Training and Extension

The DCCDI provides training in the form of seminars on financial management and loan application procedures to its prospective members. It also visits farms to determine the situation of the farmer, and how the loan is best disbursed. However, the respondents would like to see more training and extension programs offered by the cooperative, on areas such as better farming techniques and other livelihood programs. Respondents have said that since the cooperative gives them the opportunity to borrow money for capital, the most logical progression is to provide assistance in making the most from this capital. A study cited by Quisumbing and Adriano (1987:37-38) on past land reform programs of the government showed no significant differences among tenure groups as far as rice production is concerned. Farm practices, farm inputs and irrigation were found to be the significant factors in increased farm production. The respondents are therefore quite accurate in assessing their needs for improving their livelihood.

Recommendations for more training and extension within the cooperative are probably in order, but observation of the cooperative's staff limitations does not make this feasible. Staff expansion can be done at the expense of the cooperative members. Resources which might be better spent for loans will have to pay for the salaries of additional staff. A more realistic recommendation is to coordinate with the Philippine Ministry of Agriculture, specifically, the Bureau of Agricultural Extension, and have local extension workers give training sessions within the cooperative. This could also be done with resource speakers on cottage industries. Attendance could be in conjunction with loan application, or be completely voluntary. Visits to individual farms could also be arranged through the cooperative.

5.2.3 Insufficient Loans and Prices for Produce

Problems regarding the maximum amount for production loans and prices paid for produce marketed through the cooperative is not so easily solved as those which require greater coordination within the cooperative. The Land Bank of the Philippines has recently increased the loan limit to 8000 pesos per hectare, and the DCCDI is in the process of passing on this increase to its members, who could previously borrow only 6000 pesos per hectare. Still, higher production expenses and unforeseen calamities such as typhoons often makes this amount insufficient.

Low returns on products marketed through the cooperative is a common complaint, such that the request for training in marketing the produce personally is often suggested by the respondents. One of the limitations of a marketing cooperative, or a cooperative with marketing as one of its functions, is described by van Dooren (1985). A marketing cooperative cannot always buy large quantities of its members' produce and sell it when the demand is high. Thus, the cooperative member often has to be content with lower prices, or wait longer for payment. Yet, a cooperative still remains the best outlet for the produce of a small farmer, who has even less chances of affecting the market than a cooperative, just as a cooperative can adjust to price fluctuations less efficiently than large producers.

The data collected from this study suggests that funds within the cooperative should be allocated more carefully. Perhaps selling the produce at more competitive prices, and passing on the profits to the members in the form of higher compensation will improve the situation. This recommendation can only go so far, since the DCCDI has already overspent its budget slightly (Appendix 6) on some operational costs. Another alternative would be for the cooperative to give an initial payment to its members, however minimal, as they bring in their produce. A further payment, or a deposit in the member's name could be made when the produce is resold by the cooperative to third parties when the prices are higher. Based on the cooperative's performance in promoting development in rural areas, foreign agencies and the government would be well-advised to channel aid through cooperatives such as DCCDI, with stringent accounting as a condition.

5.2.4 Members' Contribution to the Cooperative

The cooperative is made up of its members. Most of the respondents are conscious of this fact, but others have perhaps not grasped the responsibilities of joining the cooperative completely. Since the cooperative management is doing its share in promoting financial responsibility, it is recommended that members who default on their loans be reminded by their fellow members of the effect of such an action on themselves. In promoting the idea that a cooperative's financial situation is closely tied in with that of its members, perhaps fewer defaults on payment will occur. Also, with their material well-being so closely associated with the cooperative's effective operation, the members would be encouraged to find ways for the cooperative to do better. Meetings would then be more interactive, rather than top-to-bottom affairs between the elected officials and other members.

5.3 Implications for Further Research

This study was done to find other options for rural development in the Philippines other than land reform, which was almost seen as a necessary condition before any progress could occur. This is not to suggest that land reform as a goal is not desirable. However, other means could be found to channel capital into the countryside without waiting for the equitable distribution of land to become an established fact. Land reform will doubtless take more time, even as it has already taken considerable time to be partially achieved. Cooperatives to provide credit and marketing facilities were presented as an alternative. This research concentrated on one cooperative, the Dayap Credit Cooperative and Development, Inc., as its object of study.

Limitations in terms of time and resources made it necessary to concentrate on one cooperative, one that was known to fulfill its mandate. However, very few of the factors that determine the DCCDI's apparent success was explained by the variables chosen for this study. Further research involving different variables, and with a cooperative that is not quite as successful as DCCDI is suggested. A comparison of cooperatives and a foray into other rural development programs could be very useful in finding patterns, and defining achievable objectives.

5.4 Concluding Statements

Ghatak and Ingersent (1984) attempt to explain the efficiency of peasant farming and the nature of technological change. According to these authors, the poor are hampered by uncertainty and overwhelming institutional, cultural and natural restraints. Removing these restraints is one of the bases for promoting rural development, and this can be done by providing agricultural support services like credit and marketing facilities to farmers.

This study was based on the premise that services seldom reach the Filipino farmer who does not have access to or ownership of land. Cooperatives formed by small farmers, whether they own land or not, were considered as an alternative to government-run programs based on land reform.

This study has confirmed that although land ownership is not a membership requirement for DCCDI, tenurial status is a significant factor in obtaining loans. The study has also discovered, rather unexpectedly, that tenurial status affects the assumption of leadership roles within the cooperative such that members who have less secure tenure status occupy positions of responsibility. This finding may be one of the significant factors in DCCDI's effectiveness as an organization that promotes rural development.

This study has also, to some extent, explained DCCDI's operations and how it fulfills most of its objectives. However, it has not been able to contrast DCCDI with less successful cooperatives on actual terms. Thus, whether the DCCDI is different because it sets the right goals or because its management and organization allows it closer adherence to those goals can be better understood by further research of other cooperatives. The researcher hopes that this study can contribute to the re-evaluation of programs that are supposed to give farmers accessibility to social and financial services.

5.5 A Postscript

In 1992, the DCCDI will be placed under the New Local Government Code, wherein many of the functions of national government will be transferred to local government (DCCDI Balita, 1992:8). Included in the code is the provision that private organizations like cooperatives will be included in local government. The draft of the provision states that

> Upon completion of the accreditation process, the local government operations officer assigned to the LGU (Local Government Unit), shall, within 15 days, call an accredited NGOs/POs to a meeting where these organizations shall choose among themselves their representatives in the various local special bodies. The selected POs/NGOs shall then designate their principal and alternate representatives who are residents of the LGU. In no case shall an organization be a member of more than one local special body within a province, city or municipality (draft, Local Government Code of 1991).

Although there is supposedly a greater role for cooperatives in the local government, the manager of the cooperative is of the opinion that it is not necessarily a welcome change. The inclusion of farmers' cooperatives such as DCCDI in local government may lead to the cooperative's shift in focus from economic and consequently, social development, to the endless circles of Philippine politics. Interviews with some of the staff members revealed a similar distaste of the possible involvement of cooperative funds if management becomes linked with largely patron-politics. Other cooperative members were either indifferent or ignorant of this development, as the code was still in draft form and not yet implemented.

There is a possible increase in bureaucracy when government interferes in a successful cooperative enterprise among farmers. This is not considered as a positive development by the researcher, but the results of the proposed law and its implementation is still open to question and perhaps, further research.

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APPENDIX 1

A Brief History of DCCDI

DAYAP CREDIT COOPERATIVE AND DEVELOPMENT, INC.

Dayap, Calauan, Laguna

Dayap Credit Cooperative & Development, Inc. (DCCDI) was established with the help of the Philippine Rural Reconstruction Movement (PRRM) in February 14, 1971. After the core leaders finished the training on cooperative management the cooperative under the name "Dayap Cooperative Credit Union, Inc" was registered on the same year (1972) with fifty-three (53) founding members and an initial capitalization of P 2,684.00. With this capital the cooperative started its loaning services to the members which had continued up to the present time. The total capitalization for those loaning services in 1989 has reached the amount of P 130,000.00.

In 1974, monitoring of the cooperative was turned over by PRRM to the Laguna Rural Development Program of the Philippine Business for Social Progress (LRDP-PBSP). In 1979, the Center for Rural Technology Development (CRTD) of the PBSP took over the monitoring function from LRDP. The cooperative by 1980 started to operate on its own with only the occasional visit from the staff of CRTD.

After the training on community-based pharmacy and on the establishement of the Botika sa Barangay by the University of the Philippines Comprehensive Community Health Program (UP-CCHP), the cooperative started to operate a small drug store in 1979. Due to lack of initial capital the drug store was started with the use of a portable table for selling the medicine. Four high school students after the training managed the drug store on rotation basis.

In 1980, the small drug store was given a permanent place and a permanent store keeper. In 1981, the cooperative added groceries, animal feeds, farm inputs and other items for sale in the store. The store had provided DCCDI members and the community with consumer goods at a reasonable price. The growth and expansion of this store had been tremendous.

The initial capital of the small drug store in 1979 was only P500.00. In 1981, the cooperative added capital worth P3,000. With this capitalization the store operated with the profit being plowed back into its operation. By 1986, the cost of inventory alone amounted to P40,000.00. In 1989 the total capitalization of the store has reached the amount of P 110,000.00.

In 1983 the cooperative started its Small Economic Assistance Program (SEAP) with a loan of P40,000.00 from PBSP to assist its farmer-members in the form of production loans. This loan from PBSP had been fully paid on the agreed upon schedule by November 1987. Through this program the cooperative earned valuable experience and insights that enabled them to operate successful production loan services in a much bigger scale for its farmer-members.

In 1985 the cooperative received a grant assistance from Canadian Saints Outreach amounting to P76,665.97 to finance its garments shop and small business loan project. The garment shop was established to reduce the cost of clothes/dresses. The small business loan was additional capital to augment the existing capital of its loaning services. These small business loans were extended to members who are vendors, store-owners or small-scale entrepreneurs running business ventures.

In 1987 the cooperative received a grant assistance of P 125,000.00 from the Mission Administered Fund of the Canadian Embassy to expand its garments shop and to provide more job opportunities to seamsters and workers in the garments shop.

The total working capital of the small business loan in 1989 has increased to P55,000.00 from its initial capital of P12,000.00. The expanded garments shop total working capital in 1989 is P134,000.00, providing job opportunities to twenty people.

In June 1988 the cooperative with an amendment of its constitution and by-laws was registered as a multipurpose cooperative. Its new name has become Dayap Credit Cooperative and Development, Inc. (DCCDI).

In 1988 the cooperative received a grant assistance of P981,634.00 from the Philippine Development Assistance program (with partners - Canadian Saints Outreach and PBSP) and another grant assistance of P150,000.00 from Outreach International (U.S.A.) to finance the Integrated Rice Farmer Assistance Package (IRFAP) project. The aim of IRFAP is to provice a package and integrated assistance through production loans, technical monitoring, post-harvest marketing, storage and palay and rice trading services to the farmer-members to cover the entire phase production (from production to marketing).

As part of the IRFAP project, DCCDI has established linkages with the Land Bank of the Philippines to augment its capital for production loan services to its farmer-members. With the grant assistance for the crop cycle of April 1988 - September 1988, DCCDI had extended production loan assistance to its farmer-members totaling P331,000.00. With the P500,000 additional capital from the

loan from Land Bank of the Philippines, the total production loans extended for the crop cycle October 1988 - March 1989 amounted to P975,000.00. The total production loan extended had increased to P1,305,000.00 for the crop cycle April 1989 - September 1989.

Through the grant assistance and its own capital, DCCDI was able to purchase a piece of land for its post-harvest ventures. Land with a total area of 1,600 square meters was purchased at a total cost of P69,370. As an integral part of the IRFAP, DCCDI availed of the Japan International Cooperation Agency - National Food Authority (JICA-NFA) facilities loan. through this JICA-NFA facilities loan DCCDI was able to construct a 350-ton capacity warehouse and procure a rice mill and a mechanical palay dryer. On its part, DCCDI constructed a small storage house for farm inputs.

The JICA-NFA facilities loan comprise an assistance package with no downpayment and no collateral arrangement with the following schedule of repayment:

- warehouse: P440,000.00 - semi-annual payment (P22,000.00) for 10 years
- rice mill : P220,000.00 -semi-annual payment (P11,000.00) for 10 years
- mechanical palay dryer - : P77,000.00 semi-annual payment (P3,850) for 10 years.

With these post-harvest facilities in place and the organizational experience of DCCDI in loaning services complemented by an in-depth preparatory study of production loans and palay/rice trading and the cooperation of the farmer-members, the collection rate of the production loans averages a very high 97.5%. The production loans are collected in kind (palay). The cooperative provides the sacks free of charge and transportation services, free from the roadside to the warehouse. The only responsibility of the farmer-members is to bring their palay payment in sacks to the roadside. The other incentive given by DCCDI is that it prices the palay P0.05 to P0.10 higher than the prevailing price when brought in as payment of the production loans.

In February 1989, DCCDI inaugurated its post-harvest facilites complex. In March 1989, DCCDI started to operate its palay and rice trading. Its rice-trading clients are not only confined to Dayap and the neighboring areas but has reached the province of Cavite and Metro Manila.

In April 1989, DCCDI paid in full its first loan from the Land Bank of the Philippines. And with the help of LBP-MSI, the cooperative was able to store some of its collected palay for future marketing. DCCDI availed of the services of LBP-MSI. These services included marketing assistance using the re-purchase system and free sacks for palay.

In response to the food crisis during the lean months affecting, especially, the poorer members, DCCDI has launched its food loan assistance project through which the poorer members of DCCDI could avail of loans in the form of rice and other basic food items at a reasonable interest rate during the lean months as an alternative to their traditional source of loans which charge usurious interest rates (at 20% or higher per month). The total capitalization of this project is P40,000.00.

The loan availment of DCCDI from LBP has increased to P1,000,000.00 in the second crop cycle of 1989. Aside from this benfit, the cooperative was also able to avail of the services of the LBP-Leasing Corporation. The cooperative has acquired a truck by which means of a lease agreement with the LBP-Leasing Corporation. DCCDI will pay amortization for two years for the truck. The cooperative started using this truck in September, 1989.

For the crop cycle of October, 1989 to March, 1990, the production loans extended to farmers had increased to P1,750,000.00. In Novemeber 1989, President Sonny Vistan of LBP visited the cooperative when the cooperative had received a positive response from him regarding DCCDI's request to further increase its credit line and to avail of other services of the Land Bank, such as the commodity loan.

The total assets of DCCDI has increased from P3,073 million in December 31, 1988 to P5,685 million in December 31, 1989. Net sales amounted to P4.6 million and net savings increased to P168,023 from last year's P74,944. also in this year (1989) DCCDI has given a 12% dividend and an 8.5 percent patronage refund on interests collected, 1% patronage refund on palay purchases and 3% patronage refund on sales of medicines and groceries. In the year 1988 the dividend was only 6% and the rate of patronage refund was only 3% for interests and sales of medicines/groceries. There was no patronage refund on palay purchases.

In February, 1990, the cooperative had acquired a computer set at a total cost of P17,500 for better record-keeping and data processing. This is in anticipation of the projected increase in membership and in the volume of business as the mangement moved to request for the increase in the credit line from the LBP amounting to P2,000,000.00 in the 1990 wet season harvest and to P3,000,000 in the 1991 dry cropping season. The money used in the acquisition of the computer is part of the income earned from the grant money received from PDAP as a result of fluctuations in the Philippine Peso/U.S. Dollar exchange rate.

In March 1990, DCCDI was nominated for the most outstanding cooperative contest. It won in the Provincial level. In June 1990, DCCDI was named the winner in the Regional level of the same contest. And in August 1990, DCCDI won in the contest's national level. The cooperative received a plaque, and a computer and printer set as a price.

Also in June 1990, the pineapple growers of Calauan and Nagcarlan were accepted as members of the IRFAP project. Initially the cooperative released P350,000 the funding of which came from the Land Bank of the Philippines.

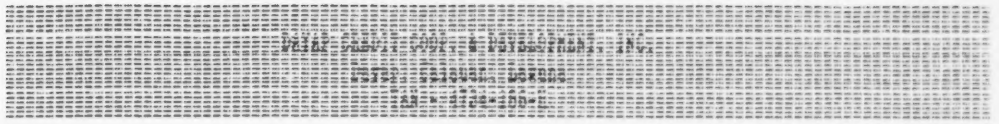
The 1990 mid-year assembly was held in Deptember 23, 1990. In this assembly, the cooperative welcomed the new group of farmers - the pineapple growers. The cooperative also partially discussed the new cooperative code of the Philippines.

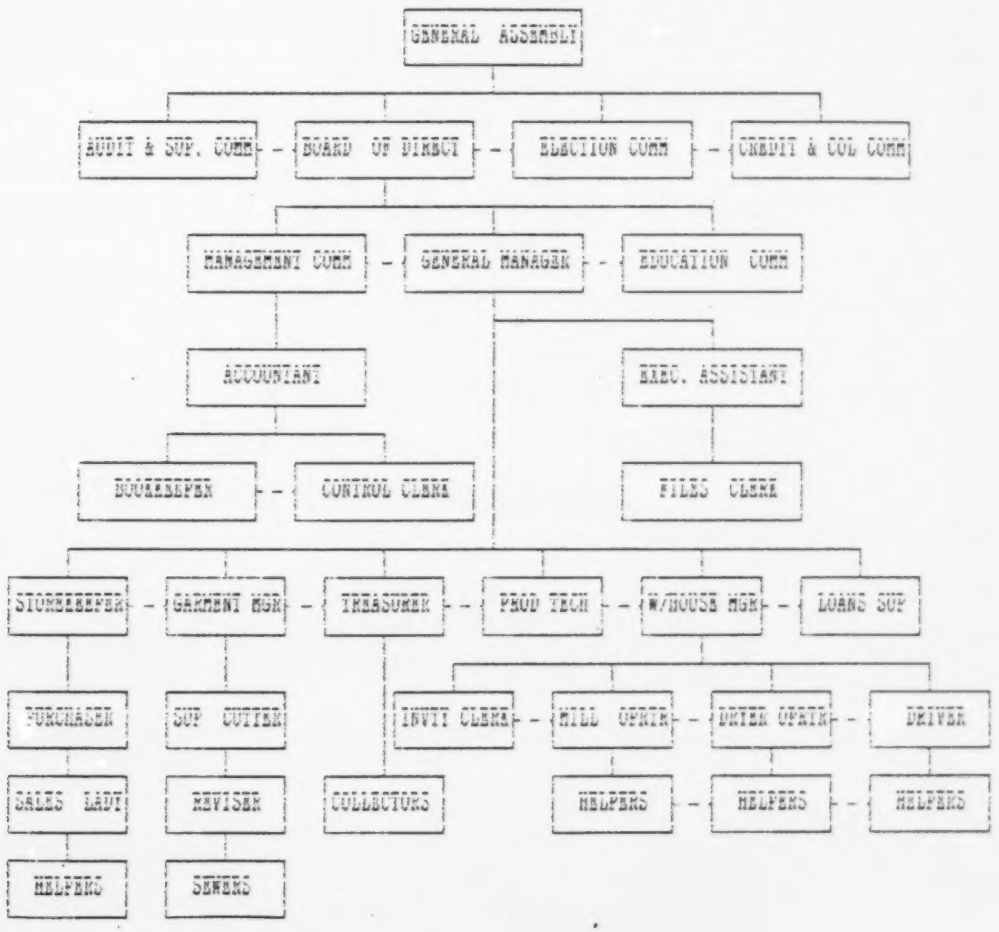
In October, 1990, another grant was received from the Philippine-German Foundation, Inc. in the amount of P98,400.00. The money was used to construct a cemented open space facility for solar drying. DCCDI gave a P270,000.00 counterpart to the project. DCCDI also constructed a new office and training building as part of its contribution.

Based on unpublished material provided by DCCDI management in 1991. The data sources include records of cooperative business by cooperative employees and management.

APPENDIX 2

Organizational Chart





APPENDIX 3

Interview Schedule

AGRARIAN REFORM IN THE PHILIPPINES:
Case Study of a Multipurpose Cooperative

by

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Name of Village _____
Household No. _____
Interviewer _____
Time/Date _____
Checked by _____

Section I: Socio-Economic Characteristics

1. Name _____
2. Age _____
3. Sex _____
4. Occupation
   primary _____
   secondary _____

5. If primary occupation is farmer, would you classify yourself as a:

landless worker	1
share tenant	2
leaseholding tenant	3
amortizing owners	4
landowner	5

6. Education (formal)

None	0
Primary	1
Secondary	2
Vocational	3
University	4

7. No. of Household Members

children (less than 15 yrs.)	_____
adults (more than 15, less than 60 yrs.)	
single	_____
married	_____
adults (more than 60 yrs.)	
single	_____
married	_____
Total	_____

8. List of Crops

Crop	Quantity Harvested	Quantity Sold
Rice	_____	_____
Pineapple	_____	_____
Citrus	_____	_____
Coconut	_____	_____
Other (specify) _____	_____	_____

9. List of Livestock

Kind	Number at Present	Number Sold
Carabao	_____	_____
Cattle	_____	_____
Pig	_____	_____
Goat	_____	_____
Other (specify)	_____	_____

10. Do you have other sources of income? (encircle one)
    yes
    no

11. How much is earned from other sources of income?
P _____

Section II: Land

1. How many hectares do you cultivate/harvest?
   less than 1 hectare 1
   1 - 3 ha 2
   4 - 6 ha 3
   7 - 10 ha 4
   10 - above (pls. specify) 5 _____

2. How many hectares are rented in from
   the cooperative _____
   individual landlord _____

3. How many hectares are rented out to
   the cooperative _____
   share tenants _____
   lease tenants _____
   landless laborers
   for harvesting _____

Section III: Labour

1. Labour per hectare in the:
   Wet Season

Task	No. of Laborers	No. of Wkdays	Payment/day Cash	Kind
Land Preparation				
Irrigation Control				
Planting				
Weeding				
Fertilizer Application				
Harvesting/Processing				
Others (specify)				

Dry Season

Task	No. of Laborers	No. of Wkdays	Payment/day Cash	Kind
Land Preparation				
Irrigation Control				
Planting				
Weeding				
Fertilizer Application				
Harvesting/Processing				
Others (specify)				

Section IV: Finances and Productivity

1. How do you finance your production costs?
(answer more than one if necessary)

Rural Bank	1
Cooperative	2
Merchants	3
Relatives/Friends	4
Landlord	5
Others (specify)	6 _____

2. If more than one answer is given, how much does each source of credit supply?

Rural Bank	_____
Cooperative	_____
Merchants	_____
Relatives/Friends	_____
Landlord	_____
Others	_____

3. If credit from rural bank/cooperative was applied for, what did the bank ask for before considering the loan?

land title	1
animal ownership	2
membership in cooperative	3
others (pls. specify)	4 _____

4. How much rice did you harvest per hectare in the

wet season?	_____
dry season?	_____

Section V: Services

1. Are you a member of a cooperative? (encircle one)
yes
no

2. If so, which one? _____

3. How much do you contribute to the cooperative in

produce	_____
cash	_____
land/ha.	_____
labor	_____

4. What benefits do you get from the cooperative in terms of

produce	_____
cash	_____
land use	_____
marketing assistance	_____
use of farm	
machinery	_____
animals	_____
inputs	

herbicide _____
pesticide _____
fertilizer _____

5. Are extension services provided by the cooperative?
   Yes 1
   No 2

6. If yes, in what form?
   Training 1
   Help in obtaining loans from rural banks 2
   Visits from extension workers 3
   Others (specify) 4

_____

7. What other services do you think the cooperative should/could provide?

8. If you are not a farmer, how does your cooperative help you?

Section 6: Contributions to the Cooperative

1. In your opinion, do you have any personal contributions to your cooperative?(Encircle one)
   yes
   no

2. If your answer is yes, what kind of contribution do you give your cooperative? Please explain further.

3. What is your role(s) in the cooperative?

Thank you very much for your time.